

UNIVERSAL
LIBRARY

OU_166779

UNIVERSAL
LIBRARY

ARGOSY BOOKS
Edited by John Hampden

WILD LIFE STUDIES

No. 3

BY THE SAME AUTHOR :

- Wild Creatures of Garden and Hedgerow* (1920).
Woodland Creatures (1922).
Shetland Pirates (1923).
Waterside Creatures (1925).
Moses, my Otter (1927).
Animal Mind (1927).
Tom, my Peacock (1928).
Diana, my Badger (1929).
Toby, my Fox-cub (1929).
Katie, my Roving Cat (1930).
Tiny, my Terrier (1931).
The Intelligence of Animals (1931).
Scotty, the Story of a Highland Fox (1932).
The Naturalist on the Prowl (1934).



Hundreds of thousands of starling voices.

WILD LIFE STUDIES

by
Frances Pitt

Illustrated by G. E. Collins



THOMAS NELSON AND SONS LTD
London Edinburgh Paris
Toronto New York

All rights reserved

THOMAS NELSON AND SONS, LTD.

London :

35-36 Paternoster Row, E.C.4

Edinburgh :

Parkside Works, Dalkeith Road

Paris :

25 rue Denfert-Rochereau

Toronto :

91-93 Wellington Street West

New York :

381-385 Fourth Avenue

TO
MY PEOPLE

CONTENTS

INTRODUCTION

AN ELF OF THE TWILIGHT	9
THE RAIDER OF THE CRAGS	15
THE LITTLE GENTLEMAN IN A RED COAT	25
PUFFIN TOWN	33
BABIES OF THE AUTUMN STORMS	43
A HIGHWAYMAN OF THE SKIES	53
THE FEROCIOUS SHREW	61
THE PLAINTIVE PEWIT	69
THE SLEEPER	79
AT THE BREAK OF DAY	89
A DAINTY CREATURE OF THE CORN	99
A BIRD STUDY IN NORWAY	109
THE MINERS	117
NATURE'S ACROBATS	123
"PRICKLES"	133
A BIRD OF THE NIGHT	143
A MIGHTY NIMROD	153
A MILLION STARLINGS	163
BIRD-WATCHING IN THE RAIN	173
A VERY MEEK CREATURE	181

ACKNOWLEDGMENTS

The Author acknowledges her indebtedness to the Editors of *The Nation*, *Country Life*, *The Spectator*, and *The National Review* for kindly allowing her to make use here of essays that have previously appeared in their pages.

ILLUSTRATIONS

Hundreds of thousands of starling voices <i>Frontispiece</i>	
The bank vole wanders forth	28
When the kestrel has a mouse beneath him	56
The plaintive pewit	72
A harvest mouse will balance itself on an ear of wheat	102
Blue tit, great tit, coal tit	126
The hedgehog leaves its hole	138
Two of the mites draw together	178
A striped face looking out of the gloom	186

INTRODUCTION

THESE essays, mostly on familiar birds and beasts, will, the author hopes, enlist the reader's interest in the life around us—the life of furred and feathered creatures, which has so much in common with our own, though we do not always realize it.

Strenuous lives have their existence in the hedge-side jungles at our doors, where there is love, hate, and fear, battle, murder, and sudden death ; joyful dancing creatures also wing their way through the evening air each summer night, to say nothing of those that dwell in meadow, copse, and dingle.

All these beings have character, individuality, and personality, and it is as real living creatures that the author strives to introduce them, rather than as the dry-as-dust species of a natural history catalogue.

WILD LIFE STUDIES

AN ELF OF THE TWILIGHT

(The Long-eared Bat)

WHEN the light begins to fade, when the western sky blushes first rose, then crimson, my elfin friend leaves his den, and tumbles forth for a brief hour of riotous life. He flings himself upon the evening air, and with rapid wing-beats, that make tiny rustling sounds, darts away upon the hunt. All the excitements of the chase are his during that short, crowded, glorious hour, and round the bushes, under the trees, about the farm buildings he goes. The calm evening air holds his quarry—dancing gnats and fluttering moths—upon which he dashes, grabbing one here, another there, and dealing destruction through the insect swarm. No time does the elf waste upon the smaller ones, but eats them as he flies ; the larger victims are, however, another matter, and the very biggest still more difficult, for how can he devour a fat moth while on the wing ? But before telling how he solves the problem, what of the elf himself ? What manner of thing is this hunter of the twilight ?

He is one of the quaintest creatures imaginable ; clad in the softest, most delicate, silky-grey fur (light grey below, brown-grey on his back), with a tiny, sharp face, wee bright eyes, wide-spreading skinny wings, and, last but not least, enormous ears, that are

longer than his own body—in short, our friend is a bat, namely the Long-eared Bat (*Plecotus auritus* Linn.), but we might well take him for a gnome escaped from fairyland.

Those ears are his great feature, for they are out of all proportion to the rest of the small creature, being amazingly overgrown organs, yet so delicate and sensitive that they are things of beauty. The skin is thin and transparent, every vein can be seen—they are never still, but wave to and fro like feelers, now extended, now retracted, now drawn back and curled up. There is something about them that reminds one of a snail's antennæ, especially when the bat withdraws them and folds them away. When the long-eared bat is sleepy it tucks its ears back, folding them under its wings, where they are safe from harm ; but the inner membrane, or tragus, which looks like a second, but smaller, ear, inside the larger one, still protrudes, so even in sleep the bat does not appear earless.

What use, if any, its enormous ears are to the bat, is a question concerning which we are in complete darkness. This species is fond of hunting among trees and bushes. Do its ears help it to thread its course through the leafy labyrinth ? The bat certainly has eyes, as all bats have, and sharp, bright, little eyes, too, but they are not in any way exceptionally developed, and cannot be much use when the light is not only failing but has failed ; yet the long-eared bat will continue to hunt when the gloom is so deep that we can only catch a glimpse of it by standing so that the hunter is silhouetted against the sky. It may be that its great ears are so exquisitely sensitive that it *hears* the objects before and around it—*i.e.* by echo, by the slight rustlings and murmurings of the leaves, etc. Can it be that these organs really serve the purpose of feelers ? I have seen a bat behave as if they did. But whatever their use, the long-eared

bat's ears are indeed wonderful; moreover, they enable one to identify the bat wherever met with, even on the wing.

The best time and place to see the long-eared bat is at dusk, in some sheltered alley between the trees, especially if there are some flowering shrubs to attract moths. Then the elfin hunter will soon be at work, fluttering to and fro through the warm, scented evening air, and at every turn and twist accounting for some member of the insect swarm. Watching, you will see the grey shape fluttering eerily by, here, then there, vanishing and reappearing, now almost brushing you as it passes with swishing wings, and again swallowed up by the shadows. The best plan is to stand against the bushes so that the sky shows up its evolutions. Then you will be able to note its twists and turns, and occasional tumbles through the air. Down it will plunge, falling headlong for a few feet, only to right itself and fly on. It has been mentioned that the prey is often disposed of on the wing, and these tumbles take place when it is dealing with an awkward capture. When the bat catches something that it cannot quite manage, it makes use of its interfemoral pouch, otherwise the skinny bag formed by the membrane stretching between the hind legs and the tail. When the tail is curved forwards beneath its owner this makes a pocket, from which a fly cannot easily escape. Now when a bat catches a medium-sized fly it bobs its head down into its pouch, so that the insect may not get away, and crunches it up therein. The business only takes a fraction of a second, during which the bat takes that queer aerial tumble already alluded to, from which it recovers in less time than it takes to tell, and flies on after another insect.

I once kept a long-eared bat for a little while on purpose to study its ways, and fed it on house-flies, of which it would consume as many as fifty at a sitting,

when it was most amusing to see it trying to pouch them in the orthodox manner. The feat, which would have been easy enough on the wing, proved too difficult when the bat was seated, and it generally overbalanced.

Bigger insects, such as moths, are treated differently, the bat carrying them off home to its den to be dealt with in a more leisurely fashion, when their wings are bitten off, and only the juicy bodies eaten. The wings, fluttering to the ground, lie beneath its roosting-place as witnesses to the sport it has enjoyed. In a shed at my home one of these bats has had a den for years. It lives in a hole over a beam, and every morning fresh moth wings are added to the litter on the floor. Evidently the bat brings each catch back, eats it on the beam, and then dashes out for another moth. It must work very hard while on the wing, for the long-eared bat, like most other bats, does not fly all night, but hunts at dusk and dawn, cramming its activities into one short delirious hour.

It is, in my experience, a solitary species, not given to congregating in colonies, but preferring each its own den, this retreat to be shared only, at the most, by one companion. To this den it is most faithful, and though it may quit it in the autumn to seek good hibernating quarters, yet the spring will find it home again. That bat already referred to, or possibly a succession of bats, has lived in the particular hole for nine or ten years, and it may be longer. When looking for winter quarters this species is apt to get into houses, when its weird appearance adds to the thrill raised by the presence of a bat in the house. General excitement ensues until the poor little thing has been evicted or has disappeared. The way one of these bats can vanish is extraordinary. Not long ago, I was trying to catch one that had got into the room, when it eluded me and disappeared, just as if it was indeed an elf from fairyland. Every window and

door was closed, and the only means of egress was the chimney, but when I lost sight of the bat it was on the opposite side of the room to the fireplace. Perhaps it had merely hitched itself upon a piece of furniture and was overlooked.

By the way, my elfin friend, like all his tribe, invariably rests head downwards, hanging himself up by his heels, which position seems to please him better than any other ; evidently he is never troubled by any rush of blood to the head ! He gives the attitude a good test too, for it is in this position that he passes his long winter sleep, sinking into a profound unconsciousness while the winter reigns without, and only coming to life again when the temperature rises, and there are insects about to be hunted and harried. Then once more he may be seen fluttering round the bushes, and the rustle heard of his skinny wings as he dashes upon a moth.

THE RAIDER OF THE CRAGS

THE RAIDER OF THE CRAGS

(The Peregrine Falcon)

ONCE beloved by the highest in the land, a pampered toy of kings, protected by statutes and acts of Parliament (offences against which might even be punishable by the extreme penalty of death), the Peregrine (*Falco peregrinus* Tunstall) has fallen on evil days, being now but an outlaw, a bandit of the crags and sea-cliffs, with every man's hand against her. Once you might have seen her in the very streets of London, borne proudly on the falconer's wrist, resplendent with decorated hood, bell, and jesses ; now she dwells in only the wildest fastnesses, where wild winds sweep over the gaunt rocks that rise against the sky, with the sea moaning unceasingly at their foot. Here she dwells, above the thunder of the waves, and from some sheltered nook raids the sea-birds below and the moorland birds above.

We say "she," because when writing of the peregrine one naturally thinks of the falcon, so much the finer and stronger of the pair. The female peregrine is quite a third larger than her mate. As in all birds of prey, the male is decidedly the smaller and weaker. The male is the inferior sex, the female the superior, and, despite the fact that in many books you will find the species as a whole written of as the "peregrine falcon," the word *falcon* should really only be used for the female, which in "days of old" it was used to denote. The old falconers were most particular to

use it thus ; to them the male was the "tiercel" or "tarsel." They despised him in comparison with his noble mate, yet in appearance both are fine birds. Dark of eye, upright of carriage, with a stately and dignified look, they have an air of nobility that is very striking. This is added to and enhanced by their intense look, possibly due to the dark moustachial stripe down each side of the face. Be that as it may, the fact remains that a peregrine sitting at rest, one yellow foot raised and folded beneath its barred breast feathers, and its gaze fixed on far-off horizons, has a look of inward contemplation and rapt thought that one meets with in no other bird. So it will sit for hours—until its meal is digested !

Yet the peregrine is no sloth, but can be galvanized into intense activity, for it is one of the finest fliers in existence. When using the latter words I do so intentionally and meaning exactly what I say, having given much thought to the speed of birds and their flying ability. For sheer straight ahead flying the homing pigeon is hard to beat. It can keep up an average of forty miles an hour on long journeys of several hundred miles, and yet higher on short distances, while if it has to sprint it can attain a mile a minute or more ; but as mistress of the air we must give the palm to the falcon. She cannot achieve the pigeon's end-on speed—I have seen homing pigeons show two wild peregrines a clean pair of heels—but all the same is very fast, and in aerial tactics is without peer. In banking, vol-planing, and climbing she is perfect. There is one moment when I verily believe she cleaves the air faster than any other winged thing, and that is when she stoops on her prey.

The peregrine falcon's method is to outfly and get above her victim, to get some distance above it, when she shoots down, like a toboggan down an invisible run, with all the pace that wings and gravity combined can give her. She drops like a thunderbolt.

One day I was standing upon the top of the great cliffs of the island of Noss, in the Shetlands, watching kittiwakes. It was a rather foggy morning, and so far was the sea below that I could only dimly see the waves breaking on the black rocks, while the birds—kittiwakes and fulmar petrels—kept appearing and vanishing again into the mist like wraiths as they circled round and round before the cliff face. Suddenly there was a rush and whistling of wings, or rather a sound as of an object cleaving the air, and by me, like a bullet, shot a peregrine tiercel. He went down into the fog like a flash, the gulls darting aside like snowflakes blown by the wind, and he passed through them and left them untouched. Was he merely amusing himself?

Hawks do play at times, and I saw a pair of peregrines that were nesting on an inland crag amuse themselves at the expense of a party of homing pigeons. Their eyrie was situated half-way up a great crag that looked over a valley, which valley lay north and south, so affording north-bound pigeons an easier route than crossing the hills to either side. Alas! for the pigeons, the raiders of the crags kept a keen look-out, and many a pigeon paid toll. A bandit would come hurtling down like a thunderbolt, and later all that one would find to tell the tale would be some feathers, perhaps a red foot and a metal ring, lying on the feeding rock.

The day we were watching, the two hawks were playing round and round, soaring into the blue sky, dropping cliffwards with chattering calls, darting up again, and evidently enjoying the spring day to their hearts' content. The greater size of the female was very apparent as we saw them outlined against the sky, and as they swooped down, so that the distant hills formed a background, the difference in their colouring was also visible. The hen was the browner of the two, the cock's back looking quite blue against the brown of the hillside.

Suddenly my companion said, "Look, there are some pigeons coming!"

Far down the valley were some white and light coloured specks. The hawks saw them too. They stopped their evolutions and swung out over the valley, "waiting on" high up in the air. Whether the pigeons did not see the raiders so far above, or trusted to their wings to save them, cannot be known, but they came on. Down went the tiercel, shooting earthwards with closed wings, stooping straight at the pigeons. Too late the pigeons realized their peril, for even as they closed their wings and dropped for shelter (from above they looked like bits of torn paper fluttering earthwards) the tiercel was upon them. But he only shot through them! Up he swung, and before the pigeons could reach cover had stooped again. Yet once more he went through them. Now a peregrine does not bungle a straightforward stoop like that—moreover, the falcon had taken no part, but was still "waiting on" above; so I could only conclude it was play, mere light-hearted fun, and practice for when he should be in deadly earnest.

Of course a peregrine does miss sometimes, even when really keen, as, for instance, when the quarry "jinks" to one side and the pace is too great for the hawk to turn. A carrion crow is an adept at the art. I have seen a fine flight by a trained hawk, belonging to the Old Hawking Club, at this quarry on Salisbury Plain. A crow was marked down feeding on some open-ground far from any shelter, the nearest trees being a small clump half a mile away. The falconer, carrying the hawk, crept as near as possible; but while still over a hundred yards away the crow saw him, rose cawing, and made off in the direction of the trees. The hawk, well known as a fine performer, was instantly thrown off, and rising in the air, went after the crow as hard as she could go. She overhauled him, but not so quickly as she would have done a rook,

attained sufficient pitch to stoop, and shot down upon him. With lightning agility the old crow dodged, and the hawk went by. It took her some moments to regain her pitch, during which the cunning crow was making as fast as his wings would carry him for the trees. Down she came again, again the crow turned and twisted, and up she had to go to get above him once more. The trees were near now. Would the black quarry reach them? Yet again the falcon flashed down, and this time the crow was not quite quick enough. One felt sorry for the cunning old rascal as a cloud of black feathers fluttered down the breeze and a limp body hurtled earthwards. The falcon swung round in the air, and then dropped on her victim.

The peregrine rarely "binds" to her prey in the air—*i.e.* she does not grasp it in mid-air, but usually knocks it down as described above, a fatal blow on the shoulders and back of the neck being given, which kills instantly. This blow is administered with the foot. When the peregrine's foot is closed, the hind toe, which has a very large strong claw, comes forward over the others, forming a keel, like a ridge of steel. When the hawk comes down on her quarry, with all the impetus that wings and gravity can give, she hits it with such force that it is knocked headlong, and sometimes the head is even severed from the body.

At home, in its wild fastnesses, the peregrine does not take such birds as crows, preferring something less strong and stringy, but puffins, kittiwakes, wild rock doves, etc., prove acceptable. Fur does not often figure in the peregrine's menu, as rabbits are not easily dealt with by a hawk coming out of the sky at the pace this one does; in fact the peregrine belongs to the air, not the earth.

The young peregrines, or eyasses, as they should be called, are soon mistresses of the air too. Cradled in

an airy spot, on a ledge of some cliff, most probably by the sea, they have from the first known the forces of the wind. But it is not gales they have to fear, it is men, who were once their best friends. No sooner has the eyrie been put in thorough order, which as the eggs are merely laid in a slight hollow does not take long to do, and the three or four handsome red-brown eggs been laid, than the egg-collector covets them. The lust for British-taken clutches of our less common birds is a mania that has sore results for many species, and the peregrine is one that suffers.

How different it was in the palmy days of falconry, when eyries were jealously guarded, and eyasses eagerly sought. Then a good hawk was a very valuable bird, and the peregrine, being looked upon as the best of all the kinds that were trained, was valued the most. The falcon was in fact reserved for the use of the nobleman, a "common man," if he was to have a hawk at all, must not aspire higher than the lazy little kestrel, or the fickle sparrow-hawk. The training of the peregrine was more than an art, it was a science, and the care, trouble, and attention bestowed on hawks, to say nothing of the time, seem incredible to us in these days. Now the bird, that was once the centre of so much attention, is, as said before, but an outlaw of the wilds—its crime that it kills the birds we want to kill ourselves.

For this reason the new-hatched eyasses have many perils to face. Some zealous keeper finds a grouse has been slain—there is a peregrine about, it must be shot ! Or the farmer's wife loses a chicken—it is one of those big hawks, kill the lot !

If one of the parents is destroyed it will go hard with the downy white babies in their nest on the cliff, for both falcon and tiercel are devoted to their family, and the latter works hard to supply them all, often doing most of the killing, which is no small matter as the family grow big and lusty. They grow at a sur-

rising pace, but some quicker than the others. The sisters have a decided, if unfair, advantage over their brothers, and quickly overtop them. Quite early the difference in size becomes visible. In our species the male *may* be the superior sex, but he is not in the hawk world ! The poor little tiercels get thrust aside by their bigger and more energetic sisters, who greedily grab the greater share of the food, and the former may even get trampled under foot ; still worse, let it be whispered under our breath, mysterious disappearances have been known ; before now, some weakly son and heir has vanished for good and all. Dare we hint that in the excitement of a family scrimmage his sisters may have eaten him ! Let us hope the evidence was misleading.

As time passes, and the summer waxes to its fullness, the young peregrines venture out on their first explorations of cliff, sea, and moor ; flapping at first on tentative wings about the rocks, and then flying more strongly to and fro, till finally they soar up and out, as strongly, as confidently, in as supreme mastery of the air, as their parents. Then they may be seen at play, flying round and round, soaring up until almost out of sight against the blue, driving at one another in mimic combat, enjoying their wonderful new life, and strengthening their wings for what is to come.

There are adventures ahead. The tide of restlessness which surges through the bird world each autumn has already taken many species south, and the impulse to move is felt also by the peregrines, especially the young ones. They must be up and off. They have long since reached independence, and are able to kill any quarry that ever their parents flew at, so why should they not go ? Go they do, winging their way overseas with the rest of the migrants, as their kind has done each autumn as long as we have knowledge, and for countless thousands of years before. Of their

troubles and adventures we know little. We only know that all being well they will come back when the tide turns, and that spring will find them journeying back to that wild shore which to them is home, there to harry the sea-birds and shore-birds as of old.

But let it be remembered that a peregrine kills for food, our raider of the crags does not slay for the joy of idle sport, or slaughter for slaughter's sake—*as man does!*

**THE LITTLE GENTLEMAN IN
A RED COAT**

THE LITTLE GENTLEMAN IN A RED COAT

(The Bank Vole)

IN the strenuous world that has its being among the undergrowth of hedgebank and ditch lives a little gentleman in a red coat ; a neat, dainty person, with a spotless white waistcoat, and the most delicate of wee hands. His eyes are dark and bright, like wet black beads, his coat is sleek and well-groomed, and he has long quivering whiskers. He is indeed a dandy, an exquisite little dandy, in his jacket of russet red, which is just the shade of red clay as it is seen between the plant stems.

And this little gentleman, who is he ? He is but a mouse, the British Bank Vole (*Eotomys glareolus britannicus* Miller), one of the dwellers in the hedgebank jungle.

He is aptly named the red bank vole, or mouse, for not only is he red, but he loves the hedgebanks, wooded places, etc., and leaves the vast plains of the open fields to that rough, furry, plebeian person, the field vole. The latter, his distant cousin, is of a much duller hue, his ears are almost buried in his fur, and he has not that sharp, alert look so characteristic of the bank vole.

The latter, as I have said, does not like the open spaces, but prefers the shelter of hedges and bushes. Deep beneath the grass, ferns, ivy, primroses, and the

hundred and one plants that clothe the banks and carpet our woodlands, run tunnels in all directions ; highways linking ditch and bush, along which tiny feet twinkle as their owners rush by on hurried expeditions. These "runs" are the common property of shrews, long-tailed mice, and last but not least, the bank vole, who travel along the shaded ways as we travel beneath the tall, over-arching trees in an ancient forest. To the small creatures that use these roads the world must be a wonderful and mysterious place, with the possibilities of great adventures in the odoriferous gloom of its green and shadowy depths. Love and battle, danger and sudden death lurk in its tunnels, in these holes and pathways that are the bank vole's universe.

Somewhere beneath an old tree stump, or down a mole hole, our friend of the red coat has his home, wherein he has made a warm nest, a bed of shredded grass and leaves, carried there, mouthful by mouthful, from the realm above. Here he dwells, snugly tucked away, in peace and comfort, save when the spirit urges him to wander forth ; then it is that tiny scufflings and the pattering of wee feet are heard as he hurries down his alleys. Off he goes, quivering with life, whiskers agog, full of affairs, and intent on this, that, and the other—on the fallen acorns from last autumn's crop, on the hips shining crimson on the bushes. He has a great liking for the latter, and often climbs aloft for them, when you may see the remnants of his feast in some disused bird's nest. Full to the brim it will be with crimson and orange fragments, showing how the tiny marauder carried his booty there to eat it on a secure platform. These dining-tables are also used by the long-tailed mice, so we must not accuse the red mouse of having eaten all the hips that have been stripped from the bushes—still, he takes his share, and being more diurnal in his habits than other mice and voles, no doubt takes more than his share. He seeks



The bank vole wanders forth.

his food not only by night but also by day. It is by no means uncommon to see a bank vole scuttling about in daylight, but the true mice stay at home until dark.

Our friend of the red coat is not only hard-working in his search for food, but is also provident in his habits, and likes to lay by a store. I once kept three bank voles in a cage in order to watch their ways, and found that one of the most marked traits in their characters was the hoarding instinct. All grain and nuts not immediately required were carefully buried. It must be explained that the cage was furnished with several inches of soil, stones, and turf, to say nothing of grass and leaves for bedding, so that their surroundings were as natural as possible. Their behaviour was most amusing. When one of the bank mice found fresh food it ate what it could and hid the rest. If some grain had been put in the vole that discovered it would look round with an anxious air, as if afraid its companions would want to share the treasure, and then begin business, bearing the corn off, a mouthful at a time, perhaps down some ready-made tunnel, or perhaps placing it in a hole scratched on purpose. Such holes were always carefully filled up when the business was finished. How hard the mice could and would work is shown by some of the notes I made. One vole removed seventy-five grains of barley in eighteen journeys, doing this in fifteen minutes. But another worked even harder; in the space of ten minutes it carried off twenty-one loads, removing ninety-one grains altogether. Its average was rather less than three grains per journey, but sometimes it contrived to stuff more into its mouth. The biggest load I saw taken away was one of seven pieces of corn, when the vole's cheeks did indeed bulge.

Despite their hard work, it seemed to be a case of out of sight, out of mind, with the mice, and they seldom reopened their hoards save by accident; most

of the buried grain sprouted and made little forests of green in the cage. Of course, in a wild state hunger might sharpen their memories, but close observation left me with the impression that these voles were actuated by an innate desire to hide what they could not eat, rather than by an intention of making provision for a "rainy day"; in short, that it was "instinct" that was the impelling factor. Yet they had no small meed of intelligence; but in the smaller creatures we often find instinctive behaviour so mixed with intelligent action that it is hard to tell where one begins and the other ends. When watching these mice I often wondered what their outlook on life was. Did they worry at all about the morrow? Or did they live almost entirely for the moment? If their memory is but short, one would suspect the latter. Our prodigious brain powers are almost entirely due to memory—it is memory of the past that enables us to look forward; so if these tiny creatures have but short memories, their troubles and fears are fleeting, and the paralysing terror caused by the shadow of a hawk's wing will be forgotten in the joy of finding good food.

To return to my bank voles, which were three in number: they were fascinating little people, with individuality and personality, often quarrelling bitterly over treasure trove, when they fought, rearing up on their hind legs, and hitting each other with their paws like little boxers; after which they would retire to opposite corners of the cage, and there wash their faces, passing little handlike paws over their heads at lightning speed. They were most particular about their toilets, washing frequently, and dressing their jackets with the greatest care. No wonder they were always neat and smart!

These three were, of course, specimens of the common British bank vole, which is a sub-species peculiar to Great Britain. *E. g. britannicus* differs from the

Continental forms of *E. glareolus* in being smaller and darker in colour; yet we have a large brightly-coloured bank vole here, for on a small island off the Welsh coast occurs a distinct species. Skomer Island, a paltry nine hundred acres or so in extent, has a fine large bank vole of its own (*E. skomerensis*), which is found nowhere else in the world; but, allowing for all its differences, it is much like our bank mouse—a little gentleman in a red coat.

PUFFIN TOWN

PUFFIN TOWN

PUFFINS to the right of us, puffins to the left of us, puffins above us, puffins below us, puffins everywhere ; such is the puffin town on Skomer Island when the busy work of nesting has brought them ashore.

The puffin population of the island is immense, their numbers are beyond count, and to estimate the inhabitants of Puffin Town is literally impossible. Wherever you look you see the quaint little people, the most comic birds Nature has designed, clad in glossy black, yet glossier white, set off by orange-red feet, the whole topped by a black-capped head, and that immense beak, gaily painted with orange and vermillion, which is *the* feature of the puffin, and always makes me think of an old-fashioned circus clown with his bedaubed face. But there is yet another striking feature in the puffin's "get up," and that is the sharp little eye in its triangular setting. That three-cornered eye is one of the quaintest touches of all. The effect is due to a straight piece of dark leathery skin below the bottom eyelid, which forms the base of the triangle, another piece of kid-like skin over the eye pointing upwards and forming the apex of the triangle. The effect is too funny for anything, but so is the whole appearance of the puffin, who irresistibly reminds one of a stout city alderman in a black coat and white waistcoat, the latter puffed out with good living and kindly importance, and a nose well tinted by an appreciation of the good things of life. That is when one does not think

of the clown ; but after all the puffin is not a clown, he is far too dignified and important. It must have been a joke on Nature's part when she painted his nose so lavishly !

Now about the puffin town on Skomer Island, that sea-girt home of sea-birds off the Welsh coast. Puffins resort to the island for breeding purposes in, as I have said, numbers unbelievable ; and here, one June day, I was wandering with puffins on all sides. They were standing in serried ranks along the cliff edge, where they could look down on the green sea boiling far below ; they were perched in groups on isolated rocks, dozing and preening their feathers, flapping their wings, and enjoying the sunshine ; they were dotted over the grassy ground behind in scores ; and last, but not least, there were puffins down below on the sea. This fleet riding upon the waves was an immense one. As far as the eye could see the water was dotted with black specks, which rose and fell upon the waves in peaceful idleness, until some alarm sent many of them scurrying and flapping off in a hurry, only to alight again, and be rocked once more by the waters. They apparently encircled the island in a half-mile wide band, for I had seen them a little while previously on the south side of the island, likewise on the north, and here they were the same on the west.

My wanderings then led me to the Wick, a great chasm cut into the island, precipitous cliffs on its one side, as if carved out of the hard black granite by a gigantic knife slicing down to the sea, and bordered on the other by a more sloping yet steep shore. At the bottom boiled the green sea in everlasting strife ; for here comes in the Atlantic swell, to crash upon the rocks, until the whole Wick seethes in angry white foam. The raging, anguished waters keep up an unceasing moan, but there is a sound that rises above it, namely, the massed cries of the sea-birds. Not only

are there puffins all around (they are not so very conversational), but the great cliff opposite holds hundreds of thousands of kittiwakes that never cease to cry "Kitti-wee! kitti-wee!" It is a soft and plaintive call; but when thousands utter it at the same time it becomes a babel. It is the moaning of the sea and the screaming of the gulls which fills the air in this busiest part of Puffin Town. Looking at the huge cliff opposite, we see that every possible ledge holds a bird or birds, according to the amount of foothold it affords, and that the black face is "white-washed" by their droppings. But these are not puffins, they are chiefly kittiwakes, though guillemots are also there in large numbers, and some razorbills, all of which help to swell the din. The upper part of the cliff is the stronghold of the gulls, which dot its face like snowflakes, and revolve on untiring wing before it, until their evolutions make one dizzy. The guillemots have possession of the lowest ridges, and the water, as said before, is thick with birds—guillemots, razorbills, and puffins riding there in hundreds of thousands.

This brings us back to our friend "Alderman Puffin." There are some days when he and all his kind sit idly on the water, and when comparatively few puffins remain on land; there are other days when all, or nearly all, go ashore, and then is the time to see the puffin stronghold on the flat ground above and around the Wick, which is one of the most thickly populated parts of Puffin Town. The ground is honeycombed with holes—rabbit burrows originally, I have no doubt—which give way, and let one in at every step. Each of these holes is tenanted by a puffin. As one stumbles along over the rotten ground, catching one's toes on the cushionlike tufts of sea-pink, and sinking over one's shoe-tops in the burrows that cave in at every step, puffins dart out, taxi along with rapidly beating wings, and gaining lifting power with

pace, rise, and fly out to sea, leaving us with a last vision of vermillion feet twinkling against the blue of the sky. Other puffins, presumably well employed below ground and too busy to come up, can be heard groaning and growling at the disturbance caused by the footsteps overhead. Their remarks are most unbirdlike ; such growling, grumbling tones, that one would think it was some furred creature that was complaining.

Unemployed puffins stand in battalions, nay, in regiments, along the verge of the bank, to say nothing of those scattered over the slope, the quaintest of 'tittle soldiers in their black-and-white uniform, every one exactly like his neighbour, all facing the sea, and into the wind, in the most approved, well-drilled, military fashion.

The bank is lined with them as far as the eye can see. Are they there to admire the view ? That long stretch of bank to the right, covered with thrift, pinker in hue than I have ever seen it before, so that the whole bank glows with flowers ; the sheets of white sea-campion growing on the rocks below, from which a sweet scent rises ; and the gaunt black face of the great cliff opposite—is it all this that the puffins are regarding ? If I were they it is along the bank that I should let my gaze wander, over the sheets of pink thrift to the horizon, where the green-blues, grey-blues, and purple-blues of the opalescent sea blend with the soft tints of blue sky and sunlit fleecy clouds.

Sitting down under the lee of a big grey stone, I settle myself to eat luncheon and watch puffins—from those close at hand, which are quite indifferent to my presence as long as I do not move too suddenly, to those riding on the waves down below. As I have said, they are standing on the cliff edge in serried ranks, on the banks in more open companies, while every stone and boulder is the vantage spot of smaller

parties. Besides which there are the puffins underground, for, one after the other, they keep popping out of the rabbit holes. To see a puffin come out of its burrow is very funny. It pops up, looks out and around, gazes about with its sharp little eyes, which look out so queerly from that triangular setting, extends its wings, and runs forward. Being a stout little person, getting under way is rather hard work ; its little wings flap hard, its orange feet flicker over the turf, and dignity is thrown to the winds as it runs down the slope. But in another moment it is on the wing, when it planes down the breeze, to alight with a splash upon the water, and shoot in among the vessels of that great fleet riding there at anchor.

Then there come puffins flying up from the sea to return to their nesting burrows, down which they pop in haste like disappearing Jack-in-the-boxes. Somewhere, a couple of feet or so underground, is an oval white egg, or rather an egg that should be white with a faint pink mark or two, but is so no longer. A scrappy nest of bits of grass hardly serves to keep it from contact with the damp soil, so it is dirty beyond recognition. This is the treasure that brings the mother puffin hurrying back from riding on the waves. Nearly every burrow in Puffin Town holds a similar treasure, or even a greater one, namely a fluffy, quaint, queer, little dark chick. The one and only child, for the puffin lays but a single egg, keeps the parent busy feeding it, and journeying to and fro. Hence the scene is an animated one; despite the numbers of puffins standing and sitting about in idleness, there are others with plenty to do. Birds keep passing overhead to and from the sea, and others keep flying up and down.

It must all be rather worrying for the rightful owners of the burrows—*i.e.*, the rabbits ; but the puffin, with his great beak, is no creature to have a dispute with, and apparently the rabbits make the best

of a bad business, and gracefully retire from all the holes that are wanted by the puffins. It was very amusing to watch rabbits, old and young, hopping about and feeding among the birds, each bird and beast quite indifferent to the other, though each apparently deriving confidence from the other's presence—at any rate the rabbits took little notice of me when the puffins were there.

Close to me was a party of puffins, some fifteen or twenty strong, sitting and standing on a big flat rock. They were typical unemployed, just lounging in the sun, with nothing to do but preen their feathers and yawn. It was a treat to see them yawn, they did it so thoroughly, opening their great beaks as wide as they would stretch ; likewise, to see them stretch their wings, raising them above their backs in lazy enjoyment of life. Then they would do a little preening, passing their beaks through their feathers in a way that showed that large horny structure to be an instrument of precision and delicacy. After a time even that was too hard work, and most of them cuddled down, fluffed their feathers out, put their bills under their wings, and went to sleep, their eyelids drooping and their little bright eyes being veiled.

There was one puffin that particularly caught my attention. It was not so dapper as the others ; its back was a trifle rusty, its breast rather soiled, and the vermillion of feet and beak was not as bright as it should have been. It sat and slept and slept. Was it a very old puffin ? Was it feeling "not quite up to the mark" ? Or what was the reason of its dingy appearance and listless behaviour ? I cannot say—an unguarded, sudden movement of mine startled the party ; they all took wing, the listless one included, and flew away down to the sea.

Looking down into the Wick into which the puffins had disappeared, listening to the clamour of the kitti-

wakes, I noted a couple of very large gulls flying along the cliff face ; they were great black-backed gulls flapping along on their six foot spread of wings. Kill and be killed is the rule by which life is maintained, but none does the killing more ruthlessly than the great black-backed gull, and often, alas ! makes our fascinating friend the puffin his victim. The great gull will descend among the puffins, grab one, and shake the life out of it in less than no time ; then disembowel the corpse, and probably leave the remainder of its victim. Only the previous day, however, I had seen a poor puffin slain in a different manner. The great gull carried the unfortunate bird down to the sea, and held it under water until it ceased to struggle. The tragedy was completed by shaking the corpse well, as if to make sure it was dead ; but as a rule the great black-back does not wait to drown a puffin, it just rips it to pieces.

Despite such tragedies as these, life cannot be so very hard for the puffin, and its mortality must be small, otherwise one egg per pair per season would not suffice to maintain the numbers of the species. Judging by the numbers of puffins we see in a puffin town like that on Skomer, it must be an extraordinarily successful bird. Of course it only goes to such places for the breeding season, for the spring and summer months, winter finding it far away over the ocean. The puffins arrive at their nesting-places during March and April (is that when the rabbits get their tails tweaked?), and soon all the holes are occupied, either by them or by Manx shearwaters, which also breed in the burrows. Having experienced the full gripping and pinching power of the puffin's beak—did I not one night, when trying to find a shearwater, put my hand into a puffin's hole ? and did I not on another occasion bravely pull one from the guardianship of its egg ?—I can only say I am sure it has its own way with regard to occupation of the holes. I will back

Alderman Puffin against all the other underground dwellers on Skomer or any other island.

As summer passes into early autumn, and the young puffins grow strong and bold, the puffin clans get restless, and one day they go. The once busy puffin town is deserted, its ways are empty, and its burrows given back to the rabbits.

Somewhere out on the far seas are the puffins, no longer puffins as we know them, but sober little people, whose beaks are now more normal, the colour having faded, and the extra horny plates been shed. Yet those beaks will be painted again when spring comes round once more, and we can look forward to meeting the puffin as the same puffin of old—Alderman Puffin, who to the scientists is known as the Southern Puffin (*Fratercula arctica grisea* Brehm).

BABIES OF THE AUTUMN STORMS

BABIES OF THE AUTUMN STORMS

(The Grey Seal)

OFF our western coast lies a lonely island, rocky-shored and wind-swept. The Atlantic rollers dash against its cliffs, and fierce tidal currents run between it and the mainland. To this sanctuary the great Grey Seal (*Halichærus grypus* Fabricius) comes to breed, for there is many a sheltered corner where seals can land in security. Here these children of the sea come, just when shelter is most sorely needed, namely in the autumn, when the equinoctial gales are at their worst, and our coasts are battered by the fury of October and November storms.

The grey seal is a large species, the largest that is met with in British waters, measuring eight to nine feet in length, and weighing several hundredweight. It is not very numerous anywhere, being much persecuted by fishermen and others who want to convert its fat and blubber into oil ; however, it occurs from the Scillies, up the coast of Wales, to Scotland, where it is more common in the Outer Hebrides, and upon the lonely islets of the Orkneys and Shetlands. It seldom congregates in such large companies as the common seal, but is usually seen in small parties, though, as I shall tell presently, I did once see quite a number together, and on occasions more considerable parties ; however, this is exceptional. It is an easily recognized species on account of its large size, long

retriever-like head (that of the common seal is much more rounded), and dappled coat, which is spotted like that of a child's rocking-horse.

As already hinted, the grey seal has a further peculiarity. It breeds in the autumn, being one of the few creatures that does so at this inclement season of the year. The young are dropped in October and November. Most of its breeding-places are on inaccessible islands—inaccessible at any time of year, but doubly and trebly so when gales are blowing and seas running high. The wildest islets of the Orkneys and Shetlands, the most inaccessible outposts of the Hebrides and the Scillies, are, as already mentioned, places they resort to; but besides these favoured localities, there are several spots on our western coast where the grey seal yet breeds.

Having long wished to see young grey seals, these babies of the autumn storms, a November morning found me on the Welsh coast, looking westward at a grey and misty island lying off the headland on which I stood. A high wind and driving rain made me wonder if it would be possible to get across, but the owner of the island was reassuring.

The rain was but a passing shower, and soon we were crossing the sound, through the narrowest portion of which the tide raced in a powerful current. The island loomed ahead, its green top borne by tall cliffs, at the foot of which lay black, jagged, toothed rocks, making a formidable defence against the angry tumbling waters. It looked inhospitably grim and stern. Yet presently we were within a sheltered haven, at the head of which was a stony beach, whence a path, cut from the cliff face, led upwards. Wild and grim it all was, yet it was a scene full of fascination. What was that black bird flitting across the cliff? No jack-daw surely, but its rare scarlet-legged cousin, the chough! An oyster-catcher or two flew over, while

three or four herring gulls watched us from the rocks, together with a lesser black-backed gull.

But what were gulls, what even was a chough, when a large head bobbed up in the water close to the boat—a seal! With strange solemn eyes it watched us land, such great melancholy eyes that seemed to hold all the mysteries of the seas. There it floated in the green water, evidently curious regarding us, until a sudden movement startled it, and it went down with a resounding “plop” that echoed along the rocks.

The North Haven, where we were, was not much good for seals, I was told; it was the South Haven where one must go to see them sunning themselves on the rocks, and there the next day, under the kind guidance of the owner (who with his wife and daughter constituted the human population of the nine hundred acres that the island embraced), I went, and found an arm of the sea, that had nearly cut the island in two, and what was more, I found the seals.

Seated on the springy turf, looking down from the cliff head upon the bay, whose waters rippled in shining grey-green wrinkles that changed in the wintery sunshine from grey, through green, to blue, and back to green, certain dark specks gradually took form, and became, as one gazed, seals riding in the haven.

As my eyes became accustomed to the scene I picked out more seals. Here a very large one, looking black in the transparent water, with a smaller and lighter seal beside it—undoubtedly a mother seal with her young one, evidently a baby that had already taken to the water. At first the little seals do not go into the sea, but are left by the old ones on the rocks, somewhere in a snug corner, high and dry above high-water mark. It is only when they “feel their legs” that they play about in the waves. However, several of these South Haven babies had already taken to the sea, for beyond the big seal and the little one were other seals, some big, some medium in size, and some

quite small, which latter were obviously young pups.

Young and old were swimming about, bobbing up and down, perfect examples of the submarine in their mastery of the sea, but doing nothing definite. "They are just waiting for the turn of the tide," said my companion. We scanned the rocks with glasses, hoping to see some ashore, but could not discern any, so at last we turned away, leaving the seals still playing upon the waves and floating idly to and fro.

Next morning, at low tide, we were back again, scanning from afar the cliff foot and its defence of grim, seaweed-covered rocks "What are those?" I said, pointing to the right, where several grey objects could be seen on a large flat-topped rock that reared a dank seaweed-festooned head above the waves.

"They look like seals, but that certainly is a youngster over there," replied my friend, pointing to a small cove away on the left, and indicating what might have been a boulder lying upon the sand. The baby, if indeed it was a seal pup, was resting quite motionless in soundest slumber.

Now I was anxious to get a photograph of a young seal, so we sprang to our feet, and hurried off, determined to get down the cliff before the baby woke and took fright. Now it is one thing to scramble hurriedly down a cliff when unimpeded, and quite another thing when burdened with camera, tripod, plates, and a particularly heavy lens. Several times it seemed as if the descent might be quicker than intended; but slipping, sliding, and bumping, down we went, and still the young seal slept. Lying there, cradled on the sand, beneath the shelter of the overhanging rocks, with the heavy murmur of the sea in his ears, he slept on.

He woke to see strange beings, such as his young eyes had never seen before, bounding over the rocks, and getting between him and the sea.

We had dropped camera and impedimenta, and had dashed to cut off James's retreat—"James" seemed to suit him so well! He stared aghast, and we looked at him. He was a portly youngster, some eight weeks or so old, and had lost his puppy coat—the pelage of the new-born grey seal is long, white, and silky—and was clad in a beautiful jacket of iron-grey velvet, dappled with lighter and darker spots. He reared himself up on his fore flippers, regarding us with his great dark eyes. He evidently did not like what he saw, for the way he turned his head towards the sea, and began to shuffle off over the sand, showed a determination to bolt. Now a seal's flippers, though the most perfect modification of the limbs possible for swimming, are poor tools on land, yet all the same Jimmy was making good progress. Resolved to do and dare in a bold bid for freedom, he made straight for the person who blocked his path seawards. Humpty, humpty, heave, bump, he came, the personification of awkwardness, of the fish out of water, yet advancing at a pace that was sadly demoralizing to the camera. Vainly I tried to erect and focus it, but the boulders with which the lower part of the beach was strewn afforded poor foothold for it and for me, and still James came on.

My companion picked up a piece of driftwood, and tried to stay his progress by brandishing it before him; but intrepid Jimmy was not so easily daunted. He seized the wood in his mouth and bit it with all his might. As yet he had only small milk teeth, but he bit that timber with such a will it was deeply marked. He bit again and again, while his great dark eyes filled with tears of fear and rage, which coursed down his face, making dark rivulets through his velvety fur. Seals are among the few creatures that, like men, weep under the influence of great emotion. Poor Jimmy was crying like a child.

At this moment the camera slipped on the slimy

rocks and fell over, at which my companion stepped back hurriedly and fell over too. Big, round, seaweed-covered boulders do not afford the best of foot-hold.

In the confusion Jimmy almost made his escape. But desperate situations need desperate measures. I dashed after him, grabbed him by his hind flippers, rolled him on his fat back, and, pulling with all my might, drew him up on to the sand.

Oh, what an insult ! What a fearful shock to a well-brought-up young seal ! The tears coursed down his face, and he lay quite quiet for a minute, with his nostrils tightly closed as if he was under water. By the way, the seal has the power of closing its nostrils and going for some minutes without air—a very necessary provision for an animal that pursues fish under the water, and may have to dive deeply and swim some way in the depths.

Presently James righted himself, such a woebegone baby that I felt a perfect brute. He had wept copiously, and I have seldom seen anything more pathetic than that tear-stained face. But his troubles were nearly over ; I took a few photographs, and then we stood aside and let him go. Off he went, humpty, bumpty, over the stones, slid into the water, and vanished, no doubt to find his mother and forget his troubles.

As previously mentioned, the young grey seal does not usually take to the water for ten days or more after its birth ; but Jimmy, of course, was a well-grown youngster, and quite at home in the sea.

James being finished with, the next thing was to investigate the large objects seen farther along the shore. Scrambling back up the cliff we proceeded to do so, and found they were seals, five huge ones, one of which was extra large—an old male and four females, we concluded. The big one lay in the middle, with two ladies on either side. They were stretched out

in attitudes of perfect peace and contentment. The sunshine glistened on their spotted coats, and on the white-topped waves that broke against the rock. The old gentleman was in particular a picture of prosperous content—until one of his wives rolled over and bumped him in the middle of the back, when he snapped at her in a most irritable fashion. He was evidently a testy old fellow. He was a trifle darker than his mates; but one of the females was exceptionally light in colour—in fact she was really white—and in the sunlight her coat shone like silver.

There they lay, and we sat on the top of the cliff and watched, while the tide came in, and the waves lapping round their rock rose higher. Other seals were playing up and down in the distance, riding on the breakers, diving, disappearing, and coming up again. One large seal came in, and was met by a small one (our James?), which appeared to take something from her, no doubt a fish, after which the little one played around. Meantime the party on the rocks slumbered on, until we forgot our precautions and raised our voices. Instantly heads were up in keen attention, for the grey seal has wonderful hearing powers, though its ears are buried beneath its fur, and a moment later the seals were tumbling into the water, diving with resounding splashes as if rocks had fallen. A dark head or two looking up from the waves, and the vacant sleeping-place, were all that was left to look down upon. But there was left a picture not easily forgotten, a picture of peace and content, of gently breaking waves, of opalescent sea fading away to the distant purple coast-line, and, last but not least, those slumbering seals in the foreground.

That it is rare to see many grey seals together has been mentioned, yet once, in Orkney, I did see quite a large party. It was on a lonely islet, where I had gone in search of that fascinating northern bird, the black guillemot. Black and white, with scarlet feet,

the "Tystie," as they call it on the islands, is an elusive creature, and round the Shetlands and the Orkneys I had tried in vain to get photographs of it. Here, at last, were black guillemots in numbers, hundreds and hundreds of them, and I was so intent on stalking them that I had no thought or eyes for anything else. I was creeping towards a group, over a rough stony beach, when a loud splash made me look up. A number of seals had been lying on some rocks a little way ahead, quite fifty or sixty, and many of these were grey seals, the rest being common ones. With the curiosity of their kind, they swam towards me and lay in the water watching my doings, their large size and long heads being in marked contrast to the small, round-headed common seals.

From here, too, I took away a memory, a picture of a low, wind-swept islet, black guillemots twittering on its boulders, grey seals and common seals in the water, and more tysties floating with them, with, as a background, the troubled waters of the sound and the green-brown bank of another island. Such was the home of the grey seal in Orkney, a home where the winds blow bitter chill, and the waves for ever pound upon the rocks.

A HIGHWAYMAN OF THE SKIES

A HIGHWAYMAN OF THE SKIES

(The Kestrel)

HIGH above the green fields he hangs, a dark speck against the blue sky and white clouds, watching for what may move below. In days of old the highwaymen watched our thoroughfares, noting those who passed along, and falling upon such as were worthy of their attentions. So does our feathered highwayman watch the highroads of the little furry people of the meadows. Though so far above he sees all that moves below ; those wonderful eyes scan the herbage, and woe to any mouse that darts along a run. However swiftly that mouse may scuttle the hawk will see it, will close its wings, and drop earthwards, descending as a “ bolt from the blue ” on the rash vole.

Such is the kestrel’s manner of earning its living. It preys on mice, on field voles in particular, and, as did the highwaymen of old, it makes them “ stand and deliver,” not the contents of their pockets, but their lives.

From its manner of hunting there is no mistaking the kestrel. It is the only small hawk we have which hangs hovering in the air ; in fact, the only hawk in this country that remains stationary in the air for minutes at a time, maintaining itself in the one spot with rapidly vibrating wings and depressed outspread tail. In some places the country folk call it the “ wind vanner,” and it certainly looks as if it were fanning the air. What sight it must have to be able to see a mouse move when it is fifty, sixty, or even a

hundred feet up in the air, and when, too, it is not really still, but in a state of rapid vibration. What exactly does it see, I wonder ? Well, it must see the details of grass and herbage as clearly as we see objects through a pair of field-glasses, besides which, as it hangs above, it must have a wonderful view of the fields, hedgerows, and woods ; of the rabbits hopping about and feeding, washing their faces, and frisking to and fro ; of blackbirds flying in and out of the fences, thrushes looking for snails, and even of a partridge covey dusting in a dry cart-track ; yet the average kestrel takes no notice of all these, but looks for something small and furred. If it fails to see it, the hawk closes its wings and glides off a little way, only to take up a fresh stand and hover over another piece of ground. Watch the hawk for a few minutes, and you will be sure to see it galvanized into swift action, dropping towards the ground with the speed of a falling stone, though maybe it will check its speed half-way. Is this when it has made a mistake, and taken the red-fawn of a weasel galloping along a mouse road for the dull brown of a vole's coat ? That is probably the reason, for our highwayman, again like those of old, does not wilfully interfere with other "gentlemen of the road." But when the kestrel really has a mouse beneath him he does not hesitate ; he dives headlong into the grass, grabs it in his foot, drags it out, gives it a squeeze, nips its head to make sure it is dead, and flies off with his booty, to eat it in some unfrequented corner.

In appearance the kestrel is most taking, having large dark eyes and a gentle kittenish expression. The latter is due to its round head and the fluffy whiskers round its beak, and, except to mice, it is a gentle, confiding bird, being quite the easiest of all hawks to tame. An old male was brought to me, having been picked up in a village street after a violent thunderstorm. It was unhurt, though wet



When the kestrel has a mouse beneath him.

(2,675)

and draggled, and I could only conclude that it had flown into something, been partially stunned, and the heavy rain had almost drowned it. It sat up on my hand and made a good meal of a sparrow, and within three days could be turned loose, when it would fly back to the fist for a reward. It was docility itself. "Jim," as I called him, was a lovely bird. He was an old cock, and in full plumage—*i.e.* he had a grey head, a reddish back, a tail of wood pigeon blue, banded with black at the end, the extremity of the feathers being tipped with white, and a cream front, streaked with umber. His beak was blue-black, his cere yellow, his eyes large, dark, and gentle, and his legs and feet were orange. Of course he was not big, even for a kestrel, for as in all hawks the male is the smaller bird. The female kestrel is not only bigger than her mate, but she is redder and darker in colour, and her tail is barred throughout its length. However, she is the same in temperament, a quiet, gentle, not to say slothful bird.

The kestrel's philosophy of life seems to be to do just as little as possible, and nothing if circumstances permit. A mouse can be caught with but little trouble—to chase a bird is far too strenuous; and so the average kestrel leaves birds alone. It sits in the sun and preens its feathers, or rests, its head sunk between its shoulders, and gazes at far horizons, with a mystic, mysterious expression in its dark eyes, which to those who know it means that it is digesting a particularly excellent mouse.

The kestrel's idle disposition was very well known to the falconers of old, who despised it as utterly useless from a sporting point of view. The poor man, who was allowed nothing better, might train a kestrel, but no one else would worry with a bird that, though so easily tamed, was too lazy to chase a blackbird. My Jim was so pleased with the free lodgings provided for him that he was in no hurry to go back to a mouse-

hunting existence, and for days after I had set him free kept returning for food.

Yet the queer thing is that many persons confuse the gentle idle kestrel with the sparrow-hawk. The only point they have in common is that they are about the same size. The latter is what is known as a short-winged hawk, while the kestrel belongs to the falcons or long-winged hawks. The sparrow-hawk is long of leg, has fierce yellow eyes that glare angrily at you, and is the wildest and maddest of creatures. Beside this it is a bird hunter, killing blackbirds and thrushes for choice ; above all, it is the keenest and most energetic of hawks.

Of course "exceptions prove the rule," and the rule that the kestrel is an idle, good-for-nothing little rascal is proved by the rare and exceptional kestrel which now and again really does take birds. But such individuals are so unusual that they only serve to emphasize the fact that the kestrel, as a species, however idle and useless it may be from a sporting point of view, is one of the agriculturist's best friends. Meadow voles and field mice are exceedingly harmful when too abundant, and the kestrel is one of our good allies that helps to keep them within bounds, so, after all, it is an excellent thing this hawk does not aspire higher.

As a further light on the kestrel's character, take its breeding habits. It never builds a nest for itself ! No, it prefers, in a wooded country, the ready-made nest of some other bird, say a sparrow-hawk's dis-used platform, or the old nest of a crow, while in an open treeless district it seeks crags or cliffs, finds a sheltered ledge, and does without any nest at all. In one of these places six handsome round eggs are laid. Their ground colour is cream, but they are so thickly spotted with brick-red, and blotched with brown, that they appear reddish-brown in colour. From these, in due course, are hatched half a dozen quaint little chicks, or, as they should be termed, eyasses,

clad in white down. They are big of head, small of body, and very helpless, but the two old hawks look after them with the tenderest care, and, fed on mice, etc., they grow apace, and are soon able to sit up, look around, and tear up their own food. As is generally the case with birds of prey, the young ones vary in size, the females being the bigger and more forward. The males are decidedly smaller, and these again vary among themselves. Very often there will be a tiny little fellow, who has a hard task to snatch his share of the food as he scrambles about among his sisters' legs.

Time goes on, and the eyasses have changed from little helpless white mites to lusty youngsters, with brown feathers coming through their down. Once that stage is reached they begin to flap their wings, standing up in the nest (for even if it is but a bare ledge we may term it "the nest") and working away valiantly. Every day adds to their strength and confidence ; they begin to scramble about on the ledge, or out on to the branches, as the case may be, when they become noisy, and scream lustily to their parents. Now, if ever, is the time when a kestrel may take a few birds, for it is hard work finding food for five or six hungry eyasses ; but no kestrel kills more than sheer necessity compels it to do.

The voice of the kestrel is a querulous chattering call, and you may hear it when the family have taken wing, and again in the early spring, when mating is taking place and the nesting site is being chosen.

One March day I was watching birds in the woods, when I heard two kestrels chattering and calling, so went quietly towards the spot whence the sound came. Apparently it was issuing from a tall old fir tree, a dark spruce, that rose tall and straight upon a long trunk like a cathedral column. Looking upwards into its heavy greenery a touch of red-brown caught my eye. On the outmost tip of a high bough was sitting a female kestrel, in the contemplative

attitude so characteristic of this bird, and on another branch, to one side, and a little below her, was a beautiful little cock kestrel. He was lovely against the dark green of the tree, his tail being so blue and his back so red. His attitude was *not* contemplative ; he was paying his addresses to the lady ! He spread his tail and bowed towards her, he chattered excitedly, flew round, came back, and chattered and bowed again. At that the hen bird lowered her head and screamed, then took wing, and the two circled round the top of the tree, hovering like moths about it, after which the female glided off, dropping in a long slanting flight into the oak trees. The cock followed her, and I heard their chattering dying away down the wood.

When late in May I came again I found that the kestrels had nested in the old sparrow-hawk's nest towards the top of the fir.

Though the kestrel breeds regularly in most of our woods, it is really a bird of the open country. It does not hunt in thick covert, but resorts to the treeless places after mice, and therefore it is not surprising to find it quite at home in the most barren and wind-swept districts. On sea-cliffs and wind-swept islands this little falcon can get a living quite as well as in the cultivated country, so you will meet with it almost everywhere, from mountain tops to the vales.

To see it at its best one should watch it on a hillside, especially when the young ones have just left the nest, and all are playing together in the air. There is nothing lazy then about our friends, for one and all are as full of life as kittens, dashing after one another, dodging, turning, and chasing, and all the while keeping up an incessant chattering and screaming. They are indeed wonderful fliers when the spirit moves them to play. It is not for nothing that the kestrel belongs to the falcons, and is known to science as *Falco tinnunculus* Linn., for it can, when it likes, fly as well as any of its noble relatives.

THE FEROCIOS SHREW

THE FEROCIOS SHREW

(The Common Shrew)

DOWN among the herbage of the hedgeside ditch, in the meadow grass, and wherever rank undergrowth flourishes, is a world of which we know little, where a host of small creatures roam through a dim twilit jungle, living their little lives unsuspected by most of us. Yet this world of the undergrowth is a strenuous one, where existence moves rapidly, where joy, love, and tragedy tread swiftly one upon the other, and where there is no knowing what the next moment may bring forth ; for down beneath the primroses, and other lowly plants, roam not only meek little vegetarian animals, mice, and grass-eating voles, but creatures more fierce than lions and tigers—predatory, devouring, ravenous beasts that rage and tear through that shadowy jungle.

It is the shrews that I mean. No animal lives more intensely than a shrew ; its life is passed in fury and flurry, in a hustle and bustle of hunting, feeding, running to and fro, of fighting and love-making, with briefly snatched intervals for rest and sleep. It is like a wee bundle of nerves and vitality, intensely alive, and incessantly on the move. Everything it does is done as if its life depends on speed and haste. Moreover, it is, for its size—the common shrew is smaller than a house mouse—one of the fiercest and most indomitable of creatures. The lion is a cowardly

skulking brute beside that wee atom of fur and vitality that we call the Common Shrew (*Sorex araneus* Linn.).

I have known a shrew of this species, when introduced into a cage where some fine long-tailed mice were living, mice that were twice as big as it, rush straight upon them, and, uttering its shrill war-cry, chase them out of their snug nest and round about the cage. The big mice were speedily reduced to such a state of demoralization that the little fiend had to be removed. This shrew, known as the "Mighty Atom," was even equal to attacking me. The tiny creature, no bigger than one's finger, thought nothing of flying at my hand, and worrying me like a demon. It was chiefly fed on worms, which, for reasons presently to be explained, were dropped into the cage, in which it lived, one or two at a time. It quickly learnt what to expect when my hand descended near it, and would rush out to slay the worms, but if it was disappointed trouble followed immediately. Should it find itself deceived, it invariably turned upon me, attacking my inoffensive fingers with a force and vehemence beyond description. Of course its tiny teeth could not make much impression, but it always did its best, and once or twice managed to prick me. It was quite fearless, and the only thing that daunted it was an extra large and slimy earthworm. It disliked getting its fur soiled.

The shrews are, of course, insectivores, with teeth of a flesh-tearing type, and are as different from the mice, with which they are often confused, as mice are from cats and dogs. Shrews are hunters and slayers, not vegetarians, and earn their living by preying upon all small things they can catch and slay. Earthworms, spiders, insects, and grubs in general, are their staple diet. They have exceedingly quick digestions, and are therefore always hungry. This is why they are the most difficult of small beasts to trap and keep in

confinement, for shortage of food for an hour or two means a rapid death from starvation. My Mighty Atom, who taught me much about shrews, was caught by the gardener when mowing, and for a marvel survived the grip of his hot and horny hand. I have known a much more tender grip fatal to one of these fragile creatures. To ensure that the Atom did not starve I took many precautions, feeding it at frequent intervals, and taking care that a good supply of big worms was put in last thing at night. I have said that it feared a very big worm, which was the only thing it did show any timidity with, and even then it was only because it disliked getting dirty. A big worm to the shrew was, of course, as bulky as a whale, or the sea-serpent itself! However, the Atom was not daunted for long; it would jump at the worm, bite it, spring back out of reach of its squirming slimy length, attack it again, and again retreat. So it would continue for several minutes, until the worm ceased to struggle so much, when the shrew would grab it by the head, and drag it backwards under the moss and ferns, where it could not squirm.

The Atom's quarters had been a vivarium in which lived sundry frogs, toads, etc., but it bullied and terrorized them to such an extent that they had all to be removed.

Marvellous as is the spirit of the common shrew, I think the pluck of the Pigmy, or Lesser Shrew (*S. minutus* Linn.) is even more wonderful, for the pigmy is such a tiny mite. No thicker than a lead pencil, its body but a couple of inches long at fullest stretch, one of the smallest mammals in the world, yet it is a true shrew, palpitating with life and vitality. Fragile and delicate as the common shrew is, the pigmy is even more delicate and highly strung. Whether this is the reason that it is not so plentiful I cannot say, but the fact remains that it is not so numerous as the common shrew. A good idea of the mouse and shrew popula-

tion of a neighbourhood can always be obtained by examining a series of owl pellets, and by doing this I obtained forty-four skulls of the common shrew to three of the pigmy.

However much the shrews may terrorize the other inhabitants of their hedgebank world, it is certain that they, too, have cause to fear, for the kestrel by day, and owls by night, represent winged death ever on the look-out for any small furry thing. How far that keen and mighty hunter, the weasel, takes toll of them I have never been able to ascertain, but am inclined to think it leaves them alone. To many creatures shrews are unpalatable ; for instance, neither cats, dogs, nor foxes will eat them, though cats and foxes will kill and play with them. This dislike seems to be due to a musky odour emitted from two small glands, one on either flank. The smell of the common and pigmy shrews is not objectionable to human noses, but that of the Water Shrew (*Neomys fodiens* Schreber) is much stronger, and quite noticeably unpleasant even to our blunted senses. This latter handsome black-and-white shrew leads a semi-aquatic life in streams and ditches, where it adds water-grubs and other moisture-loving things to its bill of fare. It is just as fierce and strenuous a creature as the other shrews, and woe to any stranger of its own species that invades the family hunting-ground. If the invader does not take the hint and retire, a hint plainly delivered with much shrill high-pitched squeaking, a battle follows, a grim, fierce duel, after which the victor eats the vanquished !

I grieve to say it, but cannibalism is quite "the thing" among shrews, and to any one wishing to study these most interesting and elusive little animals I venture this word of warning : do not, on any account, put two strange shrews together ; whether of the same or opposite sexes they will fight, and go on fighting, until one kills the other, when the victor, being pre-

cise on this point of good manners, will certainly not forget to eat his erstwhile foe.

A problem concerning shrews is the reason of the autumn mortality to which all three species are subject. At that season one frequently sees dead shrews lying on paths and roadways. In olden days people said it was because death always overtook a shrew that tried to cross a path ; latterly a theory has been put forward that shrews are annuals, that those born one summer grow up and breed the next spring, after which, like annual plants, they die off in the autumn. However that may be—and with regard to it we can only say "not proven"—the fact remains that there is a considerable mortality among these little animals at that time of year.

In fact, shrews are not only interesting in themselves, but present some interesting problems. Even the way they race about has its fascination ; and when you locate a colony, drawn to the spot by shrill and batlike squeaks, you will be held there by the sight of the tiny creatures slipping backwards and forwards, by the sound of rustling footsteps, and will stay and watch, marvelling at the great activity of the tiny beasts, to say nothing of being enthralled by this strange world, with its ogrelike and fairylike inhabitants of whose life we have so little conception.

THE PLAINTIVE PEWIT

THE PLAINTIVE PEWIT

(The Lapwing or Green Plover)

“ PE-WIT ! pee-wit ! ” it cries, such a plaintive melancholy call. “ Pe-wit ! pee-wit ! ” it repeats, the cry wailing down the breeze, to conjure up before the mind’s eye visions of open spaces, wide fields, bare fallows, rough waste grounds, and hillsides where the winds sweep over untrammelled spaces.

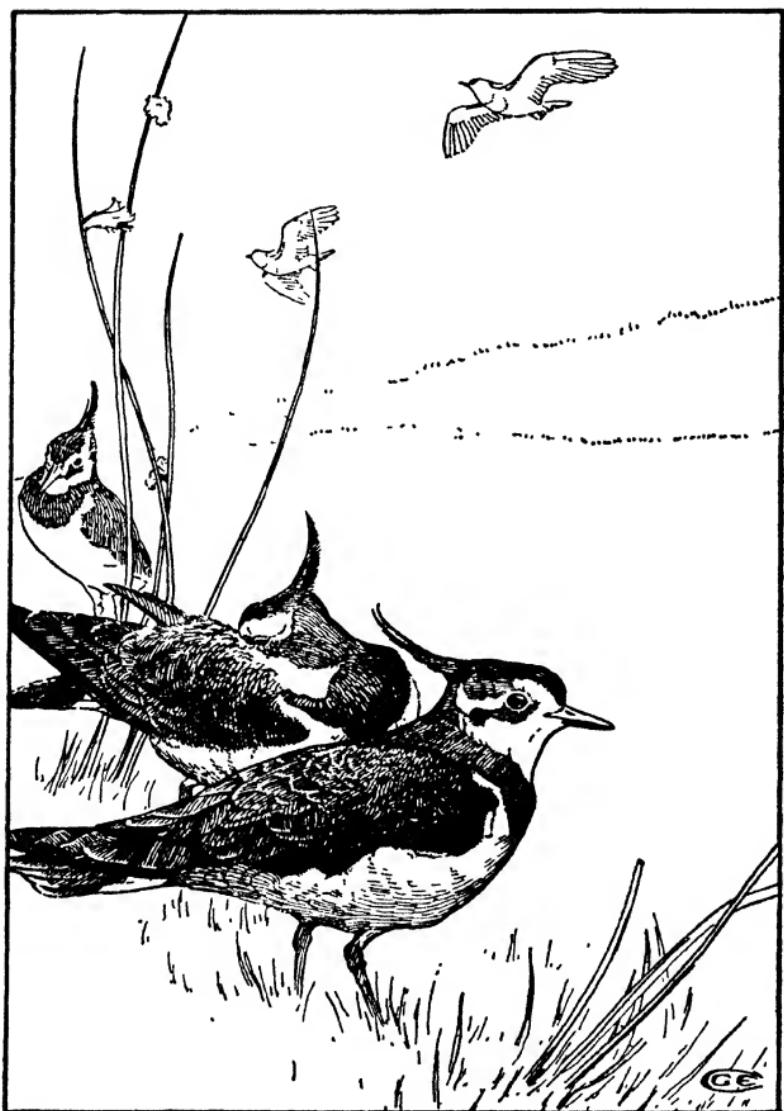
The Pewit, as the country people call it, the Lapwing, or Green Plover, *Vanellus vanellus* Linn., as they term it in books, seems the very spirit of the open spaces, of the places that are “ wide, wild, and open to the air.” Not for it the shelter of the trees, not for it the snug retreat afforded by brake and bush ; instead it keeps to the open, to the wide expanses, and the freedom of the unfettered air.

It is a wonderful performer on the wing, a marvellous flier, able to turn and twist, side slip and right itself, volplane and dash up again, and execute such amazing aerial antics that it makes one quite dizzy to watch it. But to really appreciate the pewit’s powers of flight one should watch the evolutions of a flock. In the autumn this species gathers in flocks, which are often large ones, and resorts to some good feeding ground. Then you may see what the lapwing can do in the air. Something, you know not what, causes the birds to take wing. They have been standing in serried ranks, all facing into the wind, and now they rise like a cloud, and begin to turn and twist over their

feeding ground in the most amazing aerial evolutions, turning, twisting, and swinging all together, with the precision of a regiment obeying the word of command, and with a rhythmic beauty that leaves one awestruck.

Especially do I remember watching such a flock giving an aerial performance against a background of heavy purple-black thunder clouds. The sky was lowering and gloomy, the heavy clouds being touched here and there with a coppery light. Against this stormy background the pewits performed. First the birds were almost lost in the gloom, black specks against the dark sky, then they flashed up as silver dots on a purple ground, for turning one and all simultaneously their white underparts were exposed to view. Then for a second the flock seemed to vanish, for as the birds swung they again were lost against the dark sky, but it was only for a moment, they reappeared as a dark cloud upon a dark cloud. Once more they swung about, turned, and became silver upon purple, glittering white against the storm clouds. So they went on, playing in the air, excited possibly by the coming storm, the large raindrops of which were hissing down ere the plover flock sank to earth.

Another time when the lapwing's powers of flight can be seen to advantage is in the spring, when some person, bird, or beast invades the nesting territory of a pair. Then, with frantic cries of "Pe-wit! peewit!" the two birds fly round and round, turning and twisting about him, and doing their best to engage his attention and lure him away. But perhaps they exhibit their powers to still greater advantage when some crow or rook flies over. They give that black thief but little peace until he clears off. They dash at him, screaming their plaintive war-cry, and drive down upon him, and hustle and buffet him with such effect that he does not stay to look for eggs. But the pewits do not always distinguish those that mean them no harm from real foes, and will go for an old cock



The plaintive pewit.

pheasant with as much determination as a crow, an attention that his stately majesty does not like. I saw an especially fine old cock strolling across a fallow one day, his glorious plumage resplendent in the sunshine. He stalked on, tail held at a self-important angle, his scarlet wattles swollen to their utmost, his little ear tufts erect, and an air of self-complacency oozing from every feather. Thus he strutted, until he reached the pewit's ground. With shrill cries of their everlasting "Pe-wit, pee-ee-wit!" the two birds hurled themselves upon the invader, driving at his head with surprising determination. His majesty's dignity fled, he ducked his head, his tail bobbed up, and he began to walk off. Again the pewits attacked him, again his head went down and his tail went up; but there was no escape except in retreat. Over and over again the pewits drove at the pheasant, their mournful yet excited lamentations filling the air, and then the old bird fairly took to his heels, running off as hard as he could. He raced for the cover of the fence, and disappeared into the ditch, to be seen no more.

Claims to nesting areas are staked out quite early in the spring. The lapwing flocks break up towards the end of February or the beginning of March, when the birds go off to the breeding grounds, which are usually bare exposed lands, or ploughed fields as yet unplanted. There the elaborate ceremonial of courtship is begun, the cock showing off his beautiful bronze-green plumage, white underparts, with that touch of raw sienna beneath the tail, and his dark head with its smart rakish plumes. This occipital crest, which is worn by both sexes and all ages, save the chick in down, is a mark that distinguishes the pewit from all other British birds. The female is like the male, save that her crest is shorter and her feathers are not quite so glossed with metallic tints. The cock's plumage is beautifully glossed with tints that

appear bronze, violet, or metallic-green according to the light ; but he does not depend on looks alone to gain the favour of her whom he would make his mate. He suggests the delights of nesting by scratching slight hollows in the ground, and shaping them with his breast—it is one of these “scrapes” that ultimately becomes the nest ; but before getting so far there is much wooing to be done, there are the rites of the love-dance to be performed, when the birds toss themselves in the air, tumble, and play, in the most fantastic aerial dance, upon the boisterous winds of March.

By the end of that month one of the scrapes will have been lined with some bits of grass and edged with bigger pieces, and will contain four handsome pointed eggs, heavily blotched with black on a grey-buff ground. They lie neatly in the nest, the four points meeting in the centre, and are most difficult to see (on account of their colour and markings), even when one makes a special search for them. Yet only too many are found by those keen-eyed thieves, the crows, rooks, and magpies, all of which like fresh eggs. It is a debatable point whether the loss of the first clutch is seriously detrimental to the lapwing, for it soon lays again, and if the second clutch hatches all right, the chicks will have a better chance, now that the herbage is longer and there is more cover, than they would have done earlier in the spring.

Considering that its food consists of earthworms, slugs, small snails, and insects of all kinds, including beetles and their larvæ (*i.e.* the “wireworm” and its parent the “click-beetle”), to say nothing of flies, such as the “daddy-long-legs” and its grub, the pewit is a great help to the farmer. It is not too much to say that the plover is the best friend that the agriculturist has. Every one agrees that it is of blameless reputation. Never a shadow of suspicion

has ever been breathed on its character, while the benefits it confers have been proved again and again —to call it a very useful bird is to put the case mildly.

Of course the pewit loses many nests through its preference for arable fields, the eggs being accidentally destroyed during the cultivation of the ground. It is no use the plucky birds screaming and dashing at the horses and harrow as they are driven backwards and forwards across the fallow, or again at the roller, when the young grain is being rolled. No, horses, tool, and man come on as relentlessly as doom, and the nest and its contents are gone, crushed under foot. All the poor lapwings can do is to accept their fate and start again. As the pewit will lay several clutches of eggs when robbed of her early ones, the birds may succeed in the end, but the eggs will have need of their protective coloration and their likeness to the ground upon which they rest, if they are to escape the sharp eyes of rook, crow, and magpie.

It is my experience that the first is by far and away the worst foe the ground-breeding birds have to fear. It is numerous, keen-eyed, and makes it its business to hunt for eggs. It is a common sight to see rooks systematically quartering the fields in search of pewits' eggs. The pewits may drive them away for a time, but more often than not the rook achieves its object, the theft being carried out by one bird while a comrade is being hunted away by the lapwings. I do not mean that the rooks combine, but merely that if two are hunting at the same time, either is shrewd enough to take advantage of anything which distracts the pewits' attention and to carry out a raid while its fellow is being chased away.

At this point I can imagine the reader saying, "But rooks are not egg stealers." I believe at one time they were not, but birds change, and under the pressure of necessity develop new habits. The

rook in Shropshire, where I know it best, is now a determined and confirmed egg thief.

To return to the pewit. No wonder there is a plaintive melancholy in its voice as it utters "pe-wit!" for its troubles are many; yet as a matter of fact birds are practical creatures, and do not waste time in lamentation when the eggs are really gone, but just try again as quickly as they can. By the end of May, or beginning of June, the probabilities are that four fluffy chicks will emerge, dainty, long-legged, active babies, clad in soft down of a grey colour heavily spotted with black. However well hidden the eggs were by their markings, the chicks are marvelously painted with invisible pigments. Their dark marks are the shadows between the grass stems, their light marks the high lights on its blades; yet on quite bare soil they look just like sheep droppings! They act the part too, for on the least alarm they crouch flat, and remain frozen and immobile until the old birds give the "all clear" call. But if you pick a chick up—to the infinite distress of the parents—it will, on being put down again, take to its heels and run. It knows it has been discovered and there is no use in freezing again.

What good parents the old pewits are. They dance attendance night and day on the chicks, having taken them at once to the best feeding grounds, for within an hour or two of hatching the babies are active enough to run after the old birds. One day I surprised a pewit who had been convoying her newly hatched brood across a broad highway. The four little ones had evidently got tired before the journey was half over, for she had gathered them beneath her warm white breast feathers, and was brooding them on the roadside. The gateway, through which they would have to pass, was fifteen yards ahead. Let us hope she got them through it in safety.

In a case of attack by fox, cat, or dog, the mother

lapwing will perform the broken-wing trick, and flap in seeming helplessness along the ground, so as to draw the danger to herself and away from the chicks. Then, of course, the fox, or cat, or whatever it may be, finds that the wounded bird, which seemed to be affording it such an easy catch, is more active than it thought. A chase ensues, that leads the foe away from the chicks, when the old bird rises, leaving a bewildered, befooled fox to go its way. I once saw an otter hoaxed in this manner by a wild duck, and shall never forget the hunter's amazed and sulky look when the duck at last took wing and flew away.

As for the pewit, with dangers and adventures surmounted, with the young ones grown up and independent, it can throw responsibilities to the winds, join the autumn flock once more, and whirl light-heartedly with its fellows in airy evolutions. But perhaps it does not quite forget its troubles, for in the watches of the night we hear it lamenting, "Pe-wit! pee-ee-wit!" Is it bemoaning, while other birds are asleep, the troubles of life? Be that as it may, the lapwing is one of the most restless of birds, and that plaintive cry may be heard in the darkness, as if some uneasy sprite in bird's feathers is abroad in the night.

THE SLEEPER

THE SLEEPER

(The Dormouse)

ROUND and fat, soft-furred and comfortable-looking, is that little yellow-brown creature we call the Dormouse. Its very look is sleepy, no name could fit it better—the “dor” mouse, the mouse that sleeps. And sleep it does, all through the long, cold winter months when food is scarce, a sleep of the soundest; so sound, in fact, that you might suppose it was sleeping the sleep from which there is no awakening, for all trace of animation is gone.

But what of the dormouse in the warm weather, before the chill hand of autumn has numbed its senses? It is very wide awake then! It can slip through the bushes like a flash, like a yellow fallen leaf drifting before the wind, and will vanish before you are aware you have seen it. Yet if it does stay for an instant what do you see? You will see, as I have said, a round, fat mouse, clad in thick, soft, yellowish fur, with a long, somewhat bushy tail, not very prominent ears, large lustrous black eyes, which look as if shining with unshed tears, and the daintiest of tiny handlike pink paws. These paws have a surprisingly strong grip, enabling their owner to traverse safely its aerial roads, along brier stems, honeysuckle ropes, and up and down the hazel twigs. As an acrobatic performer on the tight rope and the slack rope—*i.e.* the swaying tendril-like growths of the aforesaid honeysuckle—the dormouse is unsurpassed

among the small creatures that live in our woodland tangles.

The dormouse is essentially a woodland animal. You may find it in thick overgrown old hedges, but only when these have become miniature jungles. It never leaves the shelter of the bushes and briars it loves so much, and its favourite haunts are sheltered hazel-clad dingles, where the nut bushes are laced together with honeysuckle ropes and blackberry streamers. The open country knows it not, and to find it you must resort to such a woodland dingle as I have been describing. It is nowhere plentiful, though less uncommon in some places than others, so it will be a matter of luck whether you find trace of it or no. It is best to look for its nest, which it places up aloft in some bush. By hunting diligently you may find a small, round, neat ball, composed of honeysuckle bark fibre, nut leaves, and possibly some grass. This is a dormouse nest, and if a living one, will be but little bigger than a cricket ball. The breeding nest, or nursery, is a good deal bigger, and sometimes moss is used to strengthen its sides. As regards the living nest, the next question is whether the owner is at home—if an entrance hole is to be seen the answer is “no.” A dormouse never leaves its door open when inside, but pulls the nest material to behind it and excludes all sight of the outer world. So well does it do it that you cannot tell how or where it entered. When the mouse wants to go out, especially if in a hurry or if alarmed, it just pushes its nose through the fragile wall of its shelter, darts out, and away along one of the twigs that support the nest, which serve the dual purpose of supports and highroads. Thus you can always tell if the nest you have found is occupied or not. An exit hole means either that the mouse is temporarily away, or that the nest has been abandoned. Many nests are given up for no obvious reason, and where you find one dor-

mouse nest you will be sure to find others, all similar in type, and placed about the same height from the ground, that is to say, about three or four feet up. Higher nests are exceptional, though I once located one quite ten feet up in a hazel and honeysuckle bush. Wondering if the dormouse was at home I gave the stem a slight shake, but must have shaken too hard, for out of the nest, in a flying leap, shot the owner. It skimmed through the air, and fell with a thud on a mossy cushion, from which it picked itself up and scurried off into the tangle of ferns and woodland undergrowth. It is surprising how far a dormouse can fall without taking any harm.

With the next nest that I found I was more discreet, merely shaking it gently, very gently indeed. The response was almost instantaneous. The side of the nest bulged and parted, when a little yellow face and a pair of dark eyes gazed forth. Then a dainty paw pulled the nest material yet more aside, and the dormouse slipped out and ran down a honeysuckle rope. Here it sat up, balancing on its insecure seat, and showed its beautifully neat white underparts, while its long whiskers quivered, and it pricked its ears. Seemingly it saw nothing to alarm it (I remained perfectly still) and it began to wash its face, passing delicate paws at lightning speed over its head and neck. Then it twisted round and dressed its back, next it licked its "waistcoat," and finally it picked up and washed its long fluffy tail.

I had a splendid view of that dormouse, and not only of its procedure, but of its dainty person, being able to note the curious little paws, of which the "thumb" is so shortened as to be almost rudimentary. Nevertheless these "hands" have a tremendous grip. Witness the dormouse which went to church! It was a pet one, which had, unknown to me, got out of its cage, made its way into my mother's room, got into her wardrobe, and there curled itself up in a fur that

she wore round her neck. In this snug retreat the dormouse went very sound asleep, so sound that when Sunday came, and my mother put her fur on, she carried the dormouse to church with her. We walked over a mile to church, sat through the morning service, and it was only as we were coming out that I spied something yellow amid my mother's dark furs. It was the work of a moment to grab that mouse, now half awake, and thrust it into one of my gloves. What would have happened if it had come to life during the service? We sat just behind the choir boys I must add!

Of course the dormouse had been in that semi-unconscious state that precedes the winter hibernation. At ordinary times it would have been on the run as quickly as any other small animal. As summer passes and the autumn creeps on, as the nights get chill and the leaves on the trees turn yellow and red, the dormouse takes longer and longer naps. All summer it has been getting steadily fatter and fatter. From a slim creature it has been changing to a roly-poly ball. Good fare, first in the shape of caterpillars, grass seeds, insects, etc., and later consisting of nuts, berries, and acorns, still supplemented by insects and their larvæ, having marked effect, until now it is a living storehouse, with the winter provisions put away in its tissues.

Autumn finds this stout and comfortable dormouse dwelling in its fragile aerial nest, yet on the point of moving, for a slight woven ball is no safe refuge for a little creature which will soon be so sound asleep that it can be handled without arousing it. The dormouse therefore leaves its summer home, goes down to the ground, and seeks a really safe retreat, such as a hole in a bank, a crevice under an old tree-stump, etc., where it can make another nest. This winter one is similar to the summer one as regards the material used, save that more grass may be included. Tucked

away in this, curled up in a tight ball, with its tail over its nose, the sleeper becomes a sleeper in fact. It lapses into a comatose state, in which its breathing is so slight, and its temperature so low, that it is hard to believe it still lives ; yet it does, the engine of life has not stopped, it is only throttled down, and is turning over so slowly and gently that its revolutions are scarcely perceptible—moreover, so slowly as to use but very little fuel.

In this state of suspended animation the dormouse sleeps serenely through frost and snow, wind and rain, only coming to life when the temperature rises sufficiently to rouse it. Under normal circumstances this will be at the beginning of April, when the tender green buds are breaking into leaf, and a host of caterpillars and other grubs are hatching from their minute eggs. Then a thin and attenuated dormouse comes out to seek a dainty meal.

It is seldom realized, save by those who study the little creature, what an insectivorous mouse the sleeper is, yet the very fact that it hibernates points to this, also to the fact (despite popular belief to the contrary) that it does not lay by a store of nuts for winter use. Natural history books often state that the dormouse has its granary, but, alas ! like many another pretty story, there does not seem to be any foundation for it—if there was the dormouse would not need to sleep away the winter. I have kept many dormice in captivity, and never seen any one of them show the least desire to hoard superfluous food ; and I have searched in vain for the stores of wild dormice, but again and again have I proved their insectivorous tastes, and even a liking for the eggs of small birds. Nuts and berries are all very well, but a dormouse likes more tasty fare if it can get it. I once caught two dormice—presumably a pair—in the act of raiding a long-tailed tit's nest. The owners of the nest, dainty sprites in grey, white, and brown, were flut-

tering about in the bushes, twittering in great distress. Unable to make out what was the matter, I peeped into the bush where their nest, a wonderful domed structure covered with lichens, could be seen. From its entrance hole peeped out the yellow face and beady dark eyes of a dormouse, while sitting on a branch above was a second mouse with one of the tiny eggs in its paws.

Maybe robbery was not their only motive, for a dormouse will sometimes take temporary lodgings in a suitable bird's nest ; just as the long-tailed field-mouse will take up its quarters in a dormouse's nest, evicting the owner, and annexing the nest, when the dormouse has to build another.

At the beginning of the chapter I spoke of the breeding nest as being a more elaborate structure than the mere living nest. In my home district (Shropshire) these larger nests are seldom found before July, for with us the dormouse breeds late, often very late, so that October families are by no means exceptional. The earliest litter of which I have record was found during the last week in June, and the latest *the first week in November!* Whether the latter survived is, to say the least, doubtful, but the former would, of course, do well.

Tiny dormice are the quaintest of babies, and early develop that gripping power which enables them to sit up in security on a twig. Born naked and blind, they soon grow coats, their eyes open, and though for a while they are rather top-heavy looking, they rapidly become second editions of their parents.

There was one family that I used to call on daily whose nursery was in the usual honeysuckle-clad nut bush. It was a fairly substantial structure ; leaves, grass, and last, but not least, the indispensable honeysuckle bark fibre being woven together into a ball quite twice the size of a dwelling-place. When first

found only the old mouse was in it. A slight tap on the main stem bringing her out for my inspection, a bright-eyed little person looked down, half in alarm, half in curiosity, to see what had disturbed her. Backing quietly away, I retreated without frightening her. Two days later, when a tap again brought her out, it was obvious she now had a family in the nursery—this was August 5th. After that I visited her daily. At first she ran out whenever the nest was shaken, often scuttling up a branch and getting on the other side of it so as to be sheltered and hidden, whence she would peep round at me; but she never seemed very frightened or to have any intention of going far. For four weeks this went on, and she got to know me so well, that instead of coming out, she merely parted the side of the nest and peeped through. Then one day I took some one with me to see her, and being anxious to give them a good view, unfortunately gave the bush a too vigorous shake. The result was startling. It seemed as if that nest was a conjurer's hat containing an inexhaustible supply of dormice. They showered out of it, scuttling off along the twigs, or taking flying leaps to the ground. In sober fact there were but four or five of them, the mother and three or four youngsters, but they were so quick they seemed multiplied manyfold. I never expected to see them again, yet visited the nest on the day after, just to see if they had come back. They had! The entrance hole was neatly closed. A very gentle tap caused the fabric of the nest to quiver and the old dormouse to look out—evidently she had got her family together and home again. But what happened after that is unknown, for I was not able to go near her for ten days or more, and then found that she and her family had departed. The nest, however, had an occupant, but it was only an intruding long-tailed field-mouse, that jumped out, and ran off along a branch as skilfully as

if accustomed to live up aloft, but of the dormice I saw nothing whatever.

Though the dormouse is commonly referred to as a mouse, and I have spoken of it as such, it is really only a mouse in the sense of being a small mouse-like mammal. Scientifically *Muscardinus avellanarius* Linn. is considerably removed from the *Muridae*—*i.e.* the rats, mice, and field-mice—and is a highly specialized creature, with its unusually pre-hensile feet and other adaptations to an arboreal life. It has really more in common with the squirrels; but the fact of the matter is that the dormouse is just a dormouse, that attractive little bundle of fur and fat which shyly graces our woods and hidden dingles.

AT THE BREAK OF DAY

AT THE BREAK OF DAY

THERE is no time like the dawn to see wild creatures, for the night wanderers are still about, and the birds and beasts of the day are just awakening. At day-break in the woods you see Nature at her wildest, but to watch at dawn you must be up and away while it is yet dark, leaving a warm bed, and stumbling forth into the gloom, to be met by a chill breeze, and hear the trees rustling eerily. It is a dim and unrecognizable world at this dark hour before the dawn ; the meadows stretching grey and ghostly ahead, and trees and hedges rising in black ponderous masses with little or no discernible detail. All the same it is surprising how much you can see as your eyes become accustomed to the dark, for after all the gloom is not impenetrable. Real darkness is rare in our English countryside, and when it comes, as, for instance, on a foggy night in winter, no creature moves abroad. We are accustomed to talk of the "creatures of the dark," but we should really say the "creatures of the *night*," for all birds and beasts want some light, however little, to light them on their wanderings, not even an owl or a cat being able to see in complete darkness, though they have wonderful eyes that enable them to make the best of the very worst conditions, and no doubt enable them to see much more than I can as I stand peering across the fields.

It is four o'clock (Greenwich time), but as yet no hint of coming day has touched the eastern sky.

True, there is a faint red glow at one point on the eastern horizon, but that merely indicates a far-off blast furnace in the distant Black Country, telling of that seething hive of toil and industry, and that blackened defiled country which lies beyond the horizon where the sun will rise.

Here, however, all is peace—we are far from the roar of furnaces.

An owl hoots softly away down in the woods, and the plaintive cry of a restless lapwing is heard. The trees rustle as the breeze stirs them, and the feathery silhouette of a birch trembles against the sky. A shadowy shape flees through the shadows, a glimpse of a white tail bobbing along betraying it for a rabbit racing home over the dew-sodden grass. Dimly some cattle show up, dusky shapes magnified in the uncertain greyness until they loom gigantically; and more rabbits flee homewards as I move on.

Meantime a slight pallidness, a mere pearly hint that the sky is paling, seems apparent to the north-east, while at the same time a cock crows brazenly from a farmhouse. As if in answer to this challenge a brown owl hoots, and another, and yet another, until wood and dingle throw back the echoes. Other cocks crow, the dawn is coming, and I must hasten if I would be at the badgers' earth in time to see the badgers come home.

But suddenly I stop with a startled intake of breath. What was that? *Something* has passed down the hedgeside! A "something" that was large and grey, which ambled along and has vanished into the wood. It must have been a badger, that shyest of wild creatures. If so I am lucky, for it is seldom one catches a glimpse of a badger taking its walks abroad, as it usually gets home long before the world is awake. It is to see it go into its "sett," as the great burrow should be termed, that I am hurrying now. It will be in before I get there if I am not quick. There is more

than a hint of the dawn now. Little fleecy mackerel clouds are showing white against the purple dome of the heavens, which is fading rapidly from indigo to faintest greeny-blue, while the moon, a new one, with the "old one in its arms," gets less and less radiant. The light, too, is getting stronger, though it is still dark beneath the trees as I make my way into the wood. The gloom here is almost unfathomable; but knowing every bush, almost every stick, I am able to creep forward, until a certain tree is reached, which commands a view of the badgers' earth. Slipping down into a sitting position with my back against the trunk I prepare to wait. The vigil has begun, will it have any reward?

With tense nerves and straining eyes I peer into the gloom. Little can be seen, the stem of a young ash tree shows up in the dark, and a grey smudge means the heap of soil before one of the entrances to the sett. There are two entrance holes, the nearest being the best used one, which may be termed the front door, the farther being less used, so that it can be called the back door. As it gets lighter both will be visible, but at present I can only watch the one. My position is favourable as regards the breeze, for I am down wind of the holes; moreover, I have on an ancient coat which, during a long and useful life, has formed an intimate acquaintance with cattle, so it exhales an aroma, not to say a strong stink, of cows. Now, wild creatures have little fear of cattle, so neither badgers nor other creatures of the dawn are likely to be worried by catching a whiff of it. The odour of a human being is another matter.

Waiting and watching, the minutes creep by, while owls hoot loudly from the trees about, their calls of "Hoo-oo-ooo!" and "Ker-wick! 'wick! 'wick!" thrilling through the twilight, for the objects beneath the trees are gradually becoming more visible. The breeze seems to be dying away now that the dawn is

here, though now and again a ripple of air passes through the branches, making the leaves rustle, and causing queer little noises in the dark depths of the thickets. Each rustle makes me turn and stare in its direction, stare, and stare in vain, until fancy plays tricks and makes me think I can see some creature staring back, only to know a moment later that there is nothing there. Gazing thus into the shadows, it is wonderful what shapes they take ; but the most that materializes is a rabbit, which makes little rustling noises as it comes hopping forward over the leaves. It hops up quite close, so near I could touch it, and can see its active nose bobbing, when it suddenly gives a startled thump of its heels and bolts for dear life.

Every second now the light is getting stronger, and more detail appears on the scene. It is like watching a photograph develop, new detail after new detail comes up, until there is before one a picture of tall trees and green bushes, with, in the foreground, the mound of soil and the hole that is the entrance to the badgers' earth. But in this picture there are yet deep and gloomy shadows that the light is not strong enough to penetrate, to say nothing of a cold damp feel about it all—the dawn is chill and drear. With a shiver and a yawn I reflect on the folly of leaving a warm bed to sit under a damp tree and watch for animals that do not come.

“ Good heavens ! what is that ? ”

A weird unearthly shriek rings out, a ghastly uncanny noise, rising close at hand, ringing through the trees and across the countryside. Again and again it is uttered, seeming now near, now farther away, but always fearful. What is it ? A banshee, a lost soul in torment, or what ? It is but a badger calling to its mate ! Many times have I heard that awful cry before, yet even so I sit and shiver. A person who did not know would surely think it was an evil

spirit wandering in the dawn, or at least some poor soul being foully done to death. Once a farmer came to my people and told them that there had been some fearful deed done in the wood the previous night, for he had heard the victim screaming in the dark. He would not believe that it was only the love song of the badgers.

In the present instance the call is given but three or four times (sometimes a badger will scream ten or twelve times in succession), and after the fourth scream silence reigns. With every nerve tense, keenly on the alert now, I watch the earth, but nothing appears. A robin begins to chirp and twitter, a squirrel races along a branch, springs to another, and goes off with so much rustling that he seems vulgarly noisy, after which a dull murmur is heard. It is a distant sound, a far-off roar, like a far-away sea thundering on a rocky shore. It is really only the rooks in a big rookery a mile or so away. They are now waking, and their countless voices blend in this murmuring roar. Meanwhile two robins have finished preening themselves and are singing lustily—the only birds in these autumn days that can raise a song. The squirrel dashes overhead again. It is now so light that one can see his coat glimmer like red gold against the tree trunk, and notice that he bears a nut in his mouth. An early forager is he, much earlier than some woodland creatures, many of which rise none too soon. Then an owl hoots long and thrillingly, a wood pigeon cooes softly in its caressing voice, and the sharp, chattering shriek of an awakening blackbird comes harshly across it.

The lovers of sunlight are beginning to stir, but many night creatures are yet abroad. Are the badgers among them? No sign of them returning home has been seen, yet no respectable badger stays out after dawn, and the screaming told that one badger at least was near. Can they have slipped into the sett unseen

and unheard? I watch and watch, but obtain no answer to my query. The light is now quite strong, everything is visible, and there is no other sett within a mile and a half, so, if they have not already eluded me, I am bound to see them go in. I can only "wait and see," which is what the watcher of wild life is ever doing.

By now there are many creatures on the move; blackbirds shriek on several sides as they fly out from roost, a jay chatters, and a second gurgles in reply (it is astonishing what varied sounds a jay can make), a sheep-dog barks at the farm, a cock pheasant crows, and crows yet again, two or three more "greet the dawn," and the roar from the distant rookery swells and gains intensity. A tapping overhead draws attention to a woodpecker. Looking up, one sees through the lattice work of branches the sky gleaming in crimson and gold, for the rising sun is gilding the heavens, and its light catches the bobbing head of the woodpecker as it taps so busily. It is a great-spotted woodpecker searching for its breakfast; but the quest is not a fruitful one, for it flies off with its peculiar undulating flight, when my eyes come back to earth, to be caught as they do so by a moving form. Not ten yards off is a fox. He is quite unconscious of my presence. He is sniffing at something in the fern, but turns from it, and gives me a better view. He is a rather dark fox, with no white tag at the end of his brush, but his size shows that he is a dog-fox. The tag, contrary to general belief, is no indication of sex; the finest I ever saw was worn by a vixen. This fox I am watching is a fine fellow; he carries himself with a jaunty air, and looks as if full of content with himself. No doubt he dined well last night, and is now off to find a warm bed in which to curl up and dream of his night's adventures. He pokes about in the undergrowth in a mildly interested, casual sort of way, sniffing here and sniffing there,

stepping over the leaves as daintily and fastidiously as a cat, and then, his investigation finished, trots off at that leisured gait which is the most deceiving of paces. The blackbirds, those tell-tales, shriek at him as he goes, the jays joining in, and their clamour betrays his course down the wood. Long after he has vanished from sight I can still tell the way he is going by the outcry these birds raise. He has gone by a certain yew tree, down the steep bank, to where thick green briars and blackthorn make an impenetrable thicket. Somewhere in the heart of the bushes he will have his lair.

A tawny owl comes swinging through the trees on his silent wings, and floats off towards that same yew. He, too, is off to his sleeping place for the day, and the noisy blackbirds again raise a clamour of shrieks. The night creatures are disappearing, the day is here, and rising to my feet I abandon the watch, for it is evident that the badgers have beaten me, though how and when they managed to slip in unseen I do not know. Stiff and cold, I creep away, push through the bushes still wet with dew, and so out into the open meadows. The last creature of the night, a belated rabbit, comes racing home at top speed, while overhead the rooks are passing on their way to their feeding grounds, a noisy, cheerful, clamorous throng.

The sun is glinting on grass and fern, on bediamonded spider webs, and dew-soaked butterflies resting on thistles and scabious flowers. Here is a small blue butterfly, sitting head downwards on a rush stem, its wings so covered with shining drops you cannot see their pattern. There is a sleeping humble bee, camped on a piece of ragwort, its furry covering matted with damp, and again there is a semi-comatose wasp, hanging drowsily to a thistle—well-behaved wasps return to the nest at night, but this one's short life is nearly over. As for spider webs, the rising sun

shows every bush laced with them, to say nothing of gossamer on the grass. I walk homewards up a shining path that glitters across the meadow, at every step breaking thousands of fairy ropes, wondering as I do so if the fox is already asleep, and if the badger is snoring at the end of his hole.

A DAINTY CREATURE OF THE
CORN

A DAINTY CREATURE OF THE CORN

(The Harvest Mouse)

TINY, fragile, and exquisitely dainty, one of the smallest of our fur-clad creatures, is that dweller in the hedgeside jungle and the vast forests of our cornfields, which we call the Harvest Mouse (*Micromys minutus* Pallas). "Two of them, in a scale," said Gilbert White, "weigh down just one copper halfpenny, which is about the third of an ounce."*

This wee mouse has its world among the rank herbage of ditch and fence, among the growing corn, and elsewhere where tall grasses, reeds, etc., make covert for it. But its little life is not spent down in the shadowy depths between the stems, where ferocious shrews, long-tailed mice, and field voles have their highways, but up above, up in the swaying tops, where the grass heads bend before the breeze and the corn bows low as the wind passes. The harvest mouse is a dweller 'twixt earth and the upper air, it is a climber by profession, and at acrobatics and gymnastics is without peer. Nature has endowed it especially for that purpose, its wee paws not only being perfectly fitted for grasping and holding, but a fifth hand, in the shape of a prehensile tail, being added to the outfit. With this it can brace and balance itself on the most airy and insecure of seats, and be able at the same time to use its fore-paws for holding food or washing its face.

* *Selborne*, Letter XIII, January 22, 1768.
(2,675) 101

To see a harvest mouse sitting up eating is one of the most delightful of sights. It will balance itself on an ear of wheat, the head of corn hardly bent by such a fairy burden, and sit up, secure in the grip of hind feet and tail, which latter is encircling the stem. Thus posed, it takes a grain of wheat, holds it in its hand-like paws, and begins to nibble it, working away at a great pace. After gnawing rapidly for a few moments, the sunlight glinting on its sandy-red coat, which is so like the red shadows among the ripening corn, it pauses, looks round, sniffs the air with its tiny quivering nostrils, and drops the grain, or rather what is left of it. For an instant it remains posed, still, yet palpitating with life, its tiny "hands" extended, its little whiskers quivering, its small ears pricked, its dark eyes glistening, and then, satisfied all is well, it drops into an easier attitude, but not one of rest. It begins to wash itself. Like all mice, it is cleanliness personified, and after every exertion pauses to attend to its toilet. How many times per day it washes its face it is impossible to say, but certainly an incredible number. Its little paws are now moving over head and shoulders at a great pace, being passed behind the ears, and brought down over the eyes, nose, and whiskers so fast it is hard to see exactly what the mouse does. By watching carefully we see that it gives its paws a lightning lick between each wipe, just as a cat does, but so much quicker, that, as already remarked, it is exceedingly difficult to follow its actions. It then dresses the white fur of its under-parts, for the harvest mouse, though sandy-red above, has a very neat white "waistcoat," which extends up its throat and to those dainty little paws. In fact, the harvest mouse is daintiness personified. Its tiny fragile grace must be seen to be appreciated.

To return to our friend, its toilet is not yet finished, for it now brings a hind foot into play (one foot and



GE

A harvest mouse will balance itself on an ear
of wheat.

a tail afford quite a sufficient grip for such a climber as this mouse), with which it scratches its back and sides. This work is done at such a pace that it is now really impossible to follow the movements of the foot ! All the eye registers is a blur where the foot ought to be.

Its person having been attended to, the mouse prepares to descend. That sensitive tail, which has been curled like a tendril round the wheat stem, is unhitched, and the mouse, turning, runs head first down the stalk. It is quite indifferent whether it is head down or head up, whether it is swinging by one paw and its tail, or whether it is seated in comparative security on a stout head of grain. To such an acrobat all attitudes and positions are alike, and it vies with the tits of the bird world in its utter indifference to hanging wrong side up. *It* does not suffer from rush of blood to the head when hanging head downwards ! Nor become dizzy when suspended by one foot and its tail from the tip of the tallest head of corn—a height which for this mite is comparable to the tallest chimney ever ascended by a steeplejack.

So little does this mouse love the earth that it even makes an aerial nest, a dwelling nearly as fragile as its owner, and slung between two or three corn stems. This nest is a small, neatly woven ball of grass, which, like that of the dormouse, does not boast any proper entrance or exit. The mouse just goes in and out anywhere through the walls, and closes the hole behind it. This is its home throughout the summer, until the sound of the reaper is heard in the land. The cutting of the corn is a dire calamity to many a small creature, for deep down between the swaying stalks a large and varied population has dwelt. Long-tailed mice, bank voles, shrews, toads, frogs, etc., have had their home in its shadowy depths, first in a dark green gloom, later in brown and yellow shadows : now catastrophe descends, their world falls, and the

One was a quieter, more subdued mouse than the other. Number two was more lively, more vivacious, and inclined to bully number one ; which was not a matter of sex, for they were both females.

It seems strange to write of character, individuality, and personality where anything so tiny as a harvest mouse is concerned, but individuality looms as large in the wild world, and in the tiniest inhabitants of it, as it does in ours. No two creatures are exactly alike, either in looks or behaviour ; you can never depend on any animal behaving as its fellow did under similar circumstances. Hence, in making observations on some particular individual, one must remember, when recording them, that they only hold good for that one ; the next may be different. To be sure as to what is typical behaviour for the species as a whole, one needs to watch a number of individuals. So, because my two mice showed no desire to hoard superfluous food, I hesitate to say the species as a whole is not more provident. I can only say that mine had no thought for a "rainy day."

A hoard would, of course, be very useful in the winter, when the autumn fruits have vanished, fallen seeds are hard to find, and insects have not yet reappeared. This is the time of year when life is at its hardest for small animals—food is scarce, and has to be searched for ; cover is scanty, and the predatory beasts and the birds of prey are at their keenest. An expedition into the open is an adventure fraught with gravest perils, for the watchful kestrel, however high overhead it may be hovering, will see even the tiny harvest mouse. Then the hawk closes its wings and drops, falling earthwards like a stone—that mouse adventures forth no more.

Well, looking at it from the mouse's point of view, life, if short, had been sweet, and death came as a bolt from the blue, so swiftly it had not time to know fear. Surely that is truest mercy.

As to what is the full term of life, the longest possible span, for a little mammal such as the harvest mouse, mine lived with me for nearly two years, having been adults when they came into my hands, and both died through "misadventure," but the one was showing signs of old age when they met with the accident. They were probably about two and a half years old. As the harvest mouse only takes a few weeks to attain full size, this would mean extreme old age, in fact they must have been perfect Methuselahs.

A BIRD STUDY IN NORWAY

A BIRD STUDY IN NORWAY

(The Brambling)

As a winter visitor to our English countryside, the Brambling (*Fringilla montifringilla* Linn.) is often common, for in some seasons it comes across the North Sea in large numbers, when it may be met with in every stackyard where chaffinch and sparrow flocks come to feed. It mixes freely with other finches, but its white rump, so conspicuous when it flies, makes identification easy. This Scandinavian finch is a lovely bird, the cock being almost tortoise-shell in colour, for where our native chaffinch is pinkish in hue the brambling is yellow. But to see the brambling at its best you must see it at home in a Norwegian valley. There, in the nesting season, when the cock assumes full breeding livery, you can indeed appreciate him as one of the smartest of small birds.

I never see a brambling without thinking of the time spent in the valley of the Surna, where bramblings were very common. The handsome little cocks were everywhere, their tortoise-shell plumage catching the eye as they flitted through the tender greenery of the birch bushes, and their persistent chirp likewise catching the ear. The cock brambling has a peculiar and insistent cry, a long-drawn chirp, which he utters incessantly, at least after his nesting territory has been chosen. When giving this call, he throws himself backwards, so that the observer feels anxious lest he should overbalance, and with head pointed upwards

gives forth his cry, only to repeat it again in a few seconds. He keeps up the monotonous call all day, but it gets louder and more plaintive if any person comes near the nesting-place. Then his demure, self-effacing mate joins in, complaining likewise in melancholy chirps, but her cries are not so loud as those of the cock. In this way the pair invariably betray the whereabouts of their nest; but even when you know you are near it the nest is not easy to see, so well does it harmonize with the surroundings—*i.e.* with the trunk and branches of the tree in which it is built. It is a similar nest to that of the chaffinch, though not quite so neat. It is often beautifully decorated with lichens. I found one in a birch tree that so effectually matched the silver bark that it looked like a white boss in the fork of the white-stemmed tree. The birds had used lichen and small shreds of peeled bark until the resemblance was perfect. Lying at the bottom of the deep fibre and hair-lined cup were five dainty eggs, more like those of a linnet than of the brambling's near relation, the chaffinch.

Being a keen bird photographer I was anxious to get some photographs of the brambling at home, and hunted, literally, up and down hill for a suitable nest. Nests there were in plenty in the alders by the river, whose snow waters rushed down in raging flood, in the birch trees by the picturesque wooden farmhouses, and again in the birches that clung precariously to the high steep sides of the valley. I also found nests still higher, at the saeters, and up to the limit of the tree growth, where the ground was barely clear of snow, and over which loomed the snow-covered mountains; but all these nests were out of reach as far as the camera was concerned. The brambling has a preference for nesting at a height of from ten to twenty feet. Apparently the little grey hen likes to view a wide domain as she sits upon her four or five dainty eggs. There was one nest, as usual in a birch, from

which the brambling must have had a glorious view—stunted pines and weather-twisted birch in the foreground, mingled with outcrops of grey rock and peaty bogs, beyond which the ground sloped abruptly to barren heights, some bare and black, some snow-covered, the latter reaching white summits to the grey clouds. On the other side the ground dropped steeply to the river, which lay far below in its green valley, winding its way to the distant fjord, which could be seen as a silvery gleam shining through the purple haze.

Eventually I found a nest at which photography was possible, but it was far up the hillside. The little hiding tent having been erected several days previously, so that the birds might get used to it, a fine morning found me toiling up to it laden with photographic gear. The path was steep enough when one had nothing to carry, but when burdened with a load the incline seemed "one in one"! I was thankful I had some one with me to help carry the camera. Up and up, by twisting cattle-paths, we went, and at last reached the "hide," into which my companion tucked me, and, retreating, left me to the birds.

There were young in the nest, tiny, fluffy things, but a day or two old, which the mother had been brooding when we arrived. On the nest she looked a plain, not to say dowdy little bird, like a hen chaffinch, only rather more fawn in tint. I watched anxiously through my peep-hole in expectation of her return, as I knew both she and her mate were near, for they were chirping in the bushes—by the way, once the young are hatched the male gives up his incessant chirping, and only calls when he is uneasy—but she did not appear. Suddenly there was a flutter of wings, one of the bramblings was coming! It hopped down, twig by twig, to the nest, approaching it from behind, and appeared in the fork in which the nursery was placed. It was the male. What a little beauty he was!

His dark head, his yellow shoulders and wing bars, to say nothing of his white rump, flashed in the sunlight as he bent over the nestlings. Their little heads had shot up into the air the instant he alighted on the edge of the nest, and were now quivering, open-beaked, on their long, unsteady necks. He gave food first to one and then another, but what it was I could not tell, it being impossible to see whether it was minced-up insects carried deep in the beak, or semi-digested, regurgitated green stuff, such as buds. As the majority of finches feed by regurgitation this latter was the probable method. The click of my camera shutter made the little fellow jump high in the air and fly off in a hurry, and I may as well say here that every exposure made was spoilt by the start the birds gave. The nest was too much shaded for a really fast exposure to be possible, so, as far as photography was concerned, three days' work was thrown away. But it was not really thrown away, for to watch the birds was a joy and an education. I learnt that they only fed their young ones at quite long intervals, half to three-quarters of an hour being nothing as regards the time the young were left. In this the brambling is like the bullfinch, which does not hurry itself over the food supplies.

Sometimes the cock or hen brambling turned up alone, but more often they came within a few minutes of each other, so they must have been in the habit of foraging together. But they did not spend all their time in hunting for food, for they would stay for ten minutes or more in the bushes by the nest. The male's favourite perch was on the topmost twig of a small aspen near by, but the female liked an alder bush about five yards away. The latter would chirp occasionally, and when she began chirping it was astonishing how she could keep it up; evidently her "wind" was in first-rate condition! But when the pair had been off hunting, and were coming back with

food, you could hear them twittering softly, such wee, comfortable, confidential sounds, as if they were whispering to each other.

That they stayed away for long intervals I have already remarked; once it was for an hour and twenty-five minutes, during which there was ample time to realize how hot the day was and to study insect life. The Norwegian flies not only found their way into the tent, but were more persistently familiar than any insects I have met with. The most attentive was a large one with a hum, but it let you know it was coming. A grey "horse-fly" had more guile and drew most blood. There were also plenty of house-flies, but their attentions were more benevolent, which remark does not apply to the mosquito or two that joined the throng. The heat in the stuffy little tent made one sleepy, but the flies kept one wide awake, and I was on the alert each time the bramblings came to feed their family. It was very charming to watch the care and anxiety with which they divided the food, regarding the young ones with attentive eyes before flying away. The nestlings grew at a surprising rate, and in four days had trebled in size, so that when I visited them for the last time they were quite big.

Now, when on a winter day I see the flash of a white back among a flock of finches, it brings vividly before my mind the brambling family, both nestlings and parents, in their wild Norwegian home on that hot hillside.

THE MINERS

THE MINERS

(The Moles)

THE miners of whom I write live their whole lives beneath the ground, digging and excavating, driving tunnels and galleries in all directions, dark shafts, and tubes of many ramifications, along which the owners scuttle to and fro. Here they dwell, these miners that never see the sun, and all we know of their busy lives are the mounds of soil about the meadows, those results of their labours that we dub "mole-hills." The moles (for my miners are but moles, known to the countryman as "unts" or "moldiwarps") have to get rid of the soil they excavate, and those heaps of red earth on the green turf are equivalent to the pit mounds of a mining district. They tell of underground workings, of a subterranean world, and of an existence of which we can have little conception.

Long before man took to burrowing in the ground the mole had become a miner, and through the long ages evolution has perfected him for his trade, until now he is one of the most wonderful examples of specialization and adaptation to a peculiar environment. His short neck is sunk between his shoulders, so that his body is a small cylinder that fits his tunnel as neatly as a tube coach fits a London tube ; his fore-feet, which are peculiarly shaped and flattened for digging, stick out sideways from his body, so that he may get a better purchase on the walls of his galleries ; his fur is short, thick velvet, which repels damp, and to which soil does not adhere ; and last, but not least,

this miner, having no use for eyes, has given them up. For practical purposes the mole is blind. I say for practical purposes, because it is possible it can distinguish light from darkness ; it may be conscious of the light of day should one of its workings cave in, or when it pays one of its rare visits to the surface, as it has the vestiges of eyes, but these are the merest specks, not as big as a pin's head, buried deep beneath its thick fur, and in some cases even sealed beneath the skin. They are but remnants of the day when the mole was as other animals and a dweller in the light.

Yet though blind and living in the tomb, as we may conceive it, there is no reason to suppose that the mole needs pity, for its tunnels are the scenes of battle and love-making, fierce hunting, and strenuous deeds. The Mole (*Talpa europaea* Linn.) belongs to the Insectivora, an order which embraces some of the most intense and vital of living creatures, such as our friend the shrew ! Were lions and tigers as fierce and strenuous in comparison with their size as are the shrews and moles, this world would soon be cleared of human beings. If the shrews are the most strenuous of all animals, and I think they are, then moles come a good second. Though blind, their other senses are keen ; their nose is most sensitive, their hearing is excellent, and they are instantly aware of vibrations in the soil. They have rapid digestions, and in consequence are most voracious, a great part of their time being spent in hunting down the earthworms upon which they live. "Worms and yet more worms" is their motto, as they grab a fresh one with the fury and zest of a tiger, shaking it, and tearing it to pieces with a ferocity unbelievable. Yet greater fury animates them when they meet in combat, and fight they will if unknown to each other, fight like bulldogs, clinging to each other with tooth and claw in frantic hate.

I have several times kept moles in captivity to study their ways ; no easy task on account of the

difficulty of getting sufficient earthworms for them; and I shall never forget the two or three mole fights we had, though in each instance one combatant was but a corpse. My brother would bring in a dead mole, take it to the cage wherein the captive dwelt, and hold it near the snug nest the mole had made for itself. The effect was instantaneous. A pink, quivering nose would appear through the leaves and grass; a second later the mole would spring out of its bed, sniff round with an eager air, and then spring towards the intruding corpse. Grabbing it, it would worry it with an extraordinary ferocity, gaining fresh fury every time my brother shook the body.

Once our moles had become accustomed to their new surroundings, which consisted of a glazed cage with a few inches of soil at the bottom, with leaves and grass for bedding, they were very fearless, and most interesting to watch. They soon learnt that a slight tap on the cage meant more worms, and would come at once to get them. They ate an enormous amount of these; some sixty or more average-sized ones in the twenty-four hours, and the supply was a serious matter, especially at the end of a few weeks, when all good worm ground had been dug over several times.

My moles were very amusing about their bed-making, for each one was most particular to build itself a snug nest of grass and leaves, collecting the material in a corner of the cage, and arranging it with great care.

In a wild state the nest will be found under one of those extra large hillocks known as "the fortress" or "palace." This mound is traversed by many galleries, and has a large central chamber in which is the nest. Though no two fortresses will agree in all their details, there is one particular that is always the same, namely, the bolt-hole beneath the nest. At the bottom of the sleeping chamber, directly under the bed, a shaft goes down into the ground, serving

the double purpose of an exit in case of danger and a drain to the nest.

No doubt at times that bolt-hole is useful, for even in the mole's underground world danger walks abroad, generally taking the shape of that mighty hunter the little red weasel. This tiny hunter, small in size if mighty in daring, often finds his way into the mole's runs, slipping along the narrow tunnels like a snake ; pursuing his fell sport with as much zest in the darkness as the light ; yet whether he takes much toll of the miners may be doubted. Moles have a peculiar smell, and are distasteful to most carnivorous creatures. Dogs and foxes will not eat them ; but if they kill one, they roll on the corpse and leave it. The only exception is the buzzard, which bird of prey appears to like moles, for it brings them to the nest to feed its young. It has long been a mystery to me how the buzzard contrives to catch them. We know how chary the mole is of venturing up into the daylight, and the buzzard most certainly cannot dig, but the explanation probably lies in the mole's liking for a good bed. Leaves and grass for nest-making have to be fetched from the surface ; and in districts where there are buzzards these are only fetched at the peril of the mole's life. Can we wonder that the mole clings to the subterranean world ! With its far-extending passages it is not such a limited one either. There are the "trunk lines" going far across the meadows, by which the moles travel from point to point, and the side tunnels, often traversing ditches, bushes, and fences, which are everlastingly being extended, for they are the feeding grounds. Pushing and digging, with those wonderful paws and that immensely strong back, the mole works his way through the soil, and gets rid of the earth he has loosened by pushing it up to the surface. When we see the meadows thickly dotted with red heaps we can guess what busy little people have been working down below.

NATURE'S ACROBATS

NATURE'S ACROBATS

(The Tits)

ACROBATS indeed are the tits, able to swing upside down at any giddy height, and happily search the topmost twig of the highest tree, oblivious of the world swaying round them and the woodland floor so far below. They, like the harvest mouse, are never troubled by giddiness, rush of blood to the head, or any of the things that worry us poor humans when we go aloft, and that when we are contented to keep right side up ; yet half the time a tit will be dancing about among the branches with its head below its heels—it is obviously much easier to search a twig thoroughly when hanging upside down ! Little dark eyes are then close to their work, and the caterpillar or other insect which is to escape them, must be wonderfully well hidden.

The tits are the sleuths of the woodland world, ever on the pry, peeping here, glancing there, dragging the juicy green caterpillars from their hiding-places, even finding those that have made tunnels of the leaves by rolling them up and tying them together with silk ; to say nothing of investigating everything that comes in their path, such as the crevices of the tree trunks, where bits of silky stuff may be found, the tiny blanket that covers the spider's eggs, but which does not serve to shield them from the tit's beak ; besides which there are many pupæ tucked away in the innermost cracks of the bark, yet not so well

tucked away that prying eyes fail to discover them. Thus peeping, peering, and searching, the tits bustle about, up and down the woodlands, these busy, hustling, dainty little birds, that are known also as titmice.

There are seven British species—the Great Tit, the Coal Tit, Marsh Tit, Blue Tit, Long-tailed Tit, Bearded Tit, and the Crested Tit. The last-named two are rare, being only found in certain restricted localities : the bearded tit on the Norfolk broads, and the crested tit in a few remote Scottish valleys. So we will turn to those that may be met with in any English wood, for the rest are common throughout these islands.

To take the great tit first, by reason of the fact that it is the biggest and most important-looking. *Parus major* Linn., to give it its scientific title, is a smart bird, clad in grey-green, with a yellow waistcoat, black head, and a black gorget (that looks like a black satin choker muffled round its neck), which extends down the breast, making a black line upon the yellow "waistcoat"; but the final touch, which sets off the whole, is a pair of white cheeks. No wonder the great tit swaggers about with a self-satisfied air.

Wherever seen, whether at a bird-feed on a winter day, with the snow round about, or in the summer woods, with a background of greenery, it is a joy to watch; especially do I remember watching tits one blazing June afternoon. At least it was blazing out in the meadows, where the sun poured down out of a cloudless sky, and the flies buzzed round one with maddening persistency. But under the trees, beneath the thick overarching nut bushes, was peace. Into that dim green shadowy place the flies did not come. It was still and quiet like a great cathedral, and it seemed as if it would be desecration to move hurriedly, make any noise, or do anything to disturb this deep slumbrous calm.



Blue tit, great tit, coal tit.

Yet there was life and movement about, for somewhere overhead, among the roof of greenery that the column-like tree trunks supported, there was a sound of twittering, of many little chirping and twittering voices. Far away a wood pigeon cooed and another replied, while some young starlings, from their nest in a hollow tree, kept up a buzz of calling ; but it was the small bird voices near at hand that held my attention. Watching and listening, I became aware of movement on all sides, and then, where a ray of sunlight penetrated the canopy and shot down in a long bar of light to gild an oak bough, I became conscious of two birds sunning themselves. They were two great tits. By the freshness of their plumage it was evident that they were young birds not so very long out of the nest. There they sat, preening their feathers, and spreading their wings and tails, and bathing themselves in the patch of light. In a few moments a third joined them, and then I saw that the trees and bushes were full of tits—great tits, blue tits, and coal tits. Tiny, vivid, and blue, like a turquoise hung from a twig, was a blue tit (*Parus cæruleus* Linn.), the most fairy-like of bird acrobats. There it swung, then dropped and fluttered across to another spray, more like a lovely insect than a thing of feathers. After it came a darker tit, which, turning, showed a white patch at the back of its head—a coal tit (*Parus ater* Linn.), unmistakable by reason of that white patch, which is a most useful mark of distinction. The marsh tit (*P. palustris* Linn.) has also a black cap, but its cap extends down the nape of the neck.

Trees and bushes now seem full of tits—blue tits, great tits, and coal tits. They flutter to and fro, hunting here, there, and everywhere, save the three youngsters still sunning themselves on the sunlit branch, and not one taking any notice of me. Evidently there are three family parties here, hunting in

company, for tits are the most sociable of birds, and love to flutter through their tree-top world in a large and merry party.

A chaffinch crying "Pink! pink!" comes in among them, but is disregarded, as is a blackbird that blusters through the nut bushes. "Rustle, rustle," goes something at my feet, and looking down, I see the old dead dry oak leaves that cover the ground heaving as something passes beneath them. The pink tip of a small snout shows for a moment, only to vanish, after which all is still; evidently a mole has passed by.

Turning back to the birds, still as busy as ever, a very small tit, with a very long tail, catches my eye—surely it is a long-tailed tit? Undoubtedly it is, for there is another. A party of these charming mites have now turned up. They flit about in the nut bushes, such fragile little things, and I wonder how any creature so small and delicate can survive the buffettings of life. But *Ægithalos caudatus* Linn. cannot be quite so fragile as it looks, seeing how it does survive, and that it can withstand quite severe weather; yet sometimes circumstances are too much for it, witness the long winter of 1916–17. After that very hard season there were no long-tailed tits left in the Midlands, and it was some three or four years before they reappeared. It was many years before they regained their former numbers.

To see a tit clan at its best one should watch it on a winter day, when the trees are bare of leaves, and every movement of the feathered mites can be seen as they flit through the naked branches. You will realize how sociable, and what jolly little fellows they are, as you watch them fluttering along in a large mixed flock—long-tailed tits, coal tits, blue, great, and probably marsh tits, all together. They seem to enjoy each other's company and to like going along in a throng. It must be hard work hunting for insects at

this season of the year, when they are so few and far between, and so carefully hidden. But, as far as the long-tailed tit is concerned, they have got to be found, for it eats little else, which is why things go so hard with it in a really severe winter. The other tits are not quite so particular, and will vary their diet with nuts, etc., to say nothing of accepting thankfully contributions offered by kind friends, such as a meaty bone hung up on a tree so that they can pick at it, likewise a piece of suet or a coco-nut.

Such a bait will lure the great, coal, and blue tits to your window, and possibly the marsh tit. By the way, there is a variety of the latter, which indeed our ornithologists declare to be a distinct species, known as the willow tit (*Parus atricapillus kleinschmidti* Hellmayr)—what a name with which to burden a little bird!), but it is very similar in appearance. Indeed, it takes an expert to distinguish the two forms, and the amount of difference hardly seems to justify such a fearful name.

Nuts of all kinds are appreciated by the tits—that is, when they can reach the kernel. The great tit has a clever way of dealing with hazel nuts. It picks a nut up, carries it off, takes it to a tree with creviced bark, and drops the nut into one of the cracks, wherein it wedges it firmly. Then clinging to the tree with its feet, and bracing itself firmly by pressing its tail against the bark, it hammers the nut with its beak. It hammers and hammers until it has bored a hole, when it delicately picks the kernel out, until not a fragment is left, then it flies away and fetches another. A favourite tree will be decorated with numbers of empty nut shells.

As soon as the hard times are over, and the first hint of spring is felt, the tit parties break up. The large clans dissolve into smaller ones, and these break up into pairs, and every family mansion in titland is immediately inspected and put in order for occupa-

tion—that is, with the exception of the long-tailed tit and the bearded tit, for these species do not have historic family dwellings handed down from generation to generation, but run up a jerry-built villa each spring.

The housing problem among the other tits is indeed a curious one, for they return to the old nesting hole season after season—that is, as long as they are not disturbed. I have known of a coal tit's nest in a small hole in the trunk of an ancient yew tree for twenty successive springs; great tits nested for some years in an old pump, but left eventually because the top of the pump was damaged; great tits have also had a nest in a hole in an apple tree for the last five years, and no one knows for how long before that; and there is a crack in a garden wall, and another in a house wall, that for many, many years have served as nurseries for successive generations of blue tits.

Is it the same pair of birds that come back year after year? One can hardly suppose so, though it is probable that the nest remains in the family. What I mean is, that if the old ones survive they will return, but if one of them dies a new mate will be taken by the survivor to the old mansion, and in the event of both old birds being lost, there are still the young ones eager to return home. Thus year after year the nest hole is kept in the family, and spring after spring the nest is rebuilt, being made of moss, and lined with feathers and rabbit's wool, etc., making a beautifully soft cradle for the five or six dainty eggs, which in due course give rise to five or six ever-hungry youngsters.

Having often watched blue and great tits bringing food to the nest, chiefly small green caterpillars, I have gained some idea of the destruction of insect life effected by tits. Every nest of tits means thousands of harmful grubs the less. Supposing the young are only fed once in ten minutes during a sixteen-hour day,

and as there is no "ca' canny" about tits this is often exceeded, and that but six grubs are brought at each visit, then the day's allowance would be 576 caterpillars and other insects!

Of course the long-tailed tit does not follow the custom prevalent among our other tits, and make a nest in a hole in a tree, wall, or rock, but erects that wonderful nest which has been disrespectfully alluded to as a "jerry-built villa"! Even if not intended to last longer than a few weeks, it is still a most wonderful piece of work, being an oval ball woven of moss and hair, covered with lichens and spider cocoons, and lined with a thick bed of feathers. It is placed, as a rule, in the heart of a thick bush, where it affords as beautiful an example of bird architecture as can be found. It is this bottle-shaped work of art which earns for the long-tailed tit its country name of "can-bottle." The labour that the building of such a nest means for the two tiny birds must be terrific. There are hundreds of bits of moss to be carried, ditto of hair, and then there is the lichen, hundreds of pieces of it, and again the spider cocoons used to adorn the exterior. Even the furnishing of the interior is no small matter, for the softest of feathers must be found, not by ones and twos, but again by hundreds, with which to line it. Pheasant feathers, partridge feathers, and those of the stackyard hens, are all sought for, carried home, and tucked into the nest. It is indeed a fit cradle for the wee, fragile eggs, so small, so delicate, that a human finger may crush them if the owner is not very careful. The delicacy of the shell is such that it is semi-transparent, and the yolk showing through gives the egg a rosy hue. A dozen or more, nay, as many as fifteen, of these fragile treasures are laid at the bottom of their wonderful nursery, to be presently transformed into a pile of tiny nestlings.

Now the commissariat department may be a big

problem where the blue tit family is concerned, but what about the food supply in the case of the young long-tailed tits—*a dozen or more* hungry mouths awaiting grubs !

No wonder the old birds look shabby and worn by the end of the breeding season ; the only wonder is that they are not worn away.

Elsewhere, in a succeeding chapter, I shall speak of the problem of the long-tailed tit's nest, and shall allude to the question of how it holds the rising generation, and how the old birds manage to feed them ; so all I will say here is, when you see a long-tailed tit clan fluttering like grey moths through the winter trees, think of the grubs it has taken to rear them, think, and bless the tits.

“PRICKLES”

“ PRICKLES ”

(The Hedgehog)

PRICKLY indeed is the Hedgehog in his jacket of sharp-pointed spines, that defence which he carries with him wherever he goes, and employs to withstand the attacks of creatures sharp of tooth and claw that would like to sup on the urchin's toothsome corpse.

It is as the “ Urchin ” that the hedgehog is known in the countryside, and many and weird are the stories that the country folk have woven round the urchin's name. He is a most savage and dangerous little beast, given to killing fowls and raiding hen-roosts, to eating eggs, and killing snakes ; moreover, he thinks nothing of sucking the cows as they lie out at night in the meadows, so that they have no milk in the morning ; and last but not least, he steals apples, which he carries off on his spines ! He impales the apples on his prickles and then toddles off with them !

What manner of creature is this ferocious monster in sober reality ? Well, he is a very inoffensive little creature, and apples are about the last thing he would think of devouring, let alone carrying off, for he is really a grub-hunter and insect-eater, being a member of the order Insectivora, or the insect-eaters, in which are also placed the moles and shrews. How such a yarn ever got woven round the name of *Erinaceus europaeus* Linn., it is impossible to say. Then as for sucking cows, “ Prickles ” is prickles indeed, and has

moreover a mouthful of sharp teeth. Brave and enduring would be the cow that allowed him to milk her; besides, it is a poor milker that does not give a gallon of milk, while the poor little hedgehog's capacity would not be as much as half a pint! Marvellous indeed is legend!

As I have said, the hedgehog is a small animal, being about a couple of pounds in weight, with a coat of spines above, and coarse grey-brown hair on the face and under-parts. It has small ears, almost buried in its fur, a long sharp snout, small bright eyes, and an alert air—that is, when it is not rolled up into a ball. It has the greatest faith in its armour, and at the least sign or sound of anything strange Prickles erects his spines and curls up into a very prickly ball. Nose, feet, and all vulnerable parts are protected, and he is so strong that it is practically impossible to unroll him by force. When you try to do so he just draws himself up a little tighter.

But instead of worrying the poor animal, put him down, and retreat a little way. For a few moments Prickles will stay motionless—nothing more nor less than a ball of spines—then you will see the ball relax, the prickles lowered, so that instead of standing on end they lie smooth, and a minute later the hedgehog will look up. A sharp little face gazes round, looking suspiciously this way and that, and the small black nose quivers as its owner sniffs the air. Satisfied that all is well, the hedgehog stands up, takes another look round, and jogs off, with a gait and carriage that makes one think of a small pig. There is something decidedly pig-like about the hedgehog—this resemblance is, of course, merely superficial—and the name "hedgehog," the pig of the hedges, is quite appropriate.

The best time to see hedgehogs is a summer evening, and the best place a mowing field after the grass has been cut. The hedgehog, like most wild animals, is

nocturnal in its habits, but on a quiet warm summer evening it often comes out quite early. As the dew begins to fall, and the slugs, etc., begin to come out, the hedgehog stirs in its nest in the fence-bank, leaves its hole, and wanders forth. Then you may see a dark object toddling about in the grass, hunting here, questing there, and now and again pausing to crunch up some morsel. Now is the time to get near and see what it is doing ; but you must step carefully, very carefully, in fact, for the least vibration of the ground will alarm the nervous little beast—it will curl up in a moment. With care, however, you may get quite close, and see how busily it is hunting, how keenly it searches for worms, beetles, and slugs, and how it thrusts that keen sharp nose between the grass roots, under rubbish, and turns over sticks, etc.

With luck you may see still more. You may see a mother hedgehog and her family, the latter, some three or four in number, being miniature editions of the old ones ; such wee, quaint, little hedgehogs, bustling about in the grass, and as ready as their elders to roll into a ball if alarmed. But the baby hedgehog does not make such a good business of curling up as the old ones, for its spines are not very hard as yet, and its muscles are not strong enough to enable it to roll up really tightly ; still it tries hard.

Little hedgehogs at birth are a dull lead colour, and have a covering of soft milk-white spines, or rather what will be spines when they have hardened, for they are quite pliable at first, a very necessary provision for the mother's sake. The youngsters, who seldom exceed five in number, usually come into the world during May or June, just when there is plenty of food about, and so have time to grow and wax fat before autumn. Their nursery is generally a rabbit hole (I found some once under a heap of rubbish), down which the old hedgehog has made a comfortable nest of grass, leaves, and moss. In this she nurses them until they

are old enough to take care of themselves. By autumn they will be full-grown, or nearly so, and at any rate independent, wandering about by themselves on their evening strolls, and no longer worrying about their mother's guidance.

Both young and old wax fat and prosperous, getting fatter and fatter as the autumn creeps on, for grubs and slugs are a feeding diet, especially when supplemented with carrion. The hedgehog, like its namesake, has a pretty taste in "high" morsels, and nothing rejoices the urchin more, when strolling through the dew-sodden grass at dawn, than to come across the corpse of some rabbit the stoat has slaughtered, or the smelly remnants of the fox's supper. The longer the fragments have lain there the better, for the hedgehog appreciates a "gamey" flavour. Then it sets to work with gusto, ripping and tearing, and eating as much as it can of the semi-putrid flesh. The rising sun will shine down upon a very well-contented hedgehog trotting off home with bulging sides, licking its little paws as it wends its way through the bracken, between the thistles, under the briars, over the meadow, and down to the ditch where the rabbit holes are, leaving behind it a trail upon the wet grass that will show until the sun dries the world. By that time the urchin will have licked its paws clean, curled itself up in its nest deep in the bank, and gone sound asleep.

This taste for carrion often leads poor Prickles into sad trouble, besides earning him a reputation that he does not deserve. Should the gamekeeper set a trap for a poaching cat, baiting it with some meat or a rabbit's paunch, it is ten to one that the urchin will wind it, and led by his sensitive nose, make straight for it. Of course the keeper says that the hedgehog is a sad fellow, forthwith asserting that it kills rabbits, pheasants, and partridges, to say nothing of taking their eggs. With regard to egg stealing, it is un-



The hedgehog leaves its hole.

doubtedly a fact that hedgehogs may be, and often have been, caught in traps placed near nests ; but as hedgehogs travel up and down the hedgerows, using the rabbit "runs" as highroads, this is hardly proof that they were there to "suck eggs," any more than one would accuse blackbirds of taking pheasants' eggs because they too fall victims to traps placed on the open bank. Strong evidence that the hedgehog is not an habitual egg-thief is afforded by my experiments with captives. These I offered eggs, not once or twice, but several times, but never an egg was touched, even when the hedgehogs were kept short of food. One egg was left in the hedgehogs' place for days, and rolled about among the food and bedding, but they took no notice of it.

The strongest proof that the hedgehog's staple diet is insectivorous is the fact that it hibernates. During the cold months, when grubs and insects are scarce, the urchin is sleeping soundly underground.

As the autumn advances and the nights get colder, as the berries begin to turn coloured on the bushes and the bracken begins to turn yellow, when the mists hang white in the hollows in the morning and the butterflies flap slowly about on tattered wings, the hedgehog begins to make up its bed. It carries quantities of leaves and moss into the chosen rabbit burrow, filling the hole, and making itself a very warm nest. While the weather continues mild it will still come out, wander around, and hunt, though not so briskly as of yore ; but the first touch of frost will decide matters, and send the hedgehog into the deep unconsciousness of hibernation. Curled up snugly, the portly little person will slumber on, while overhead the winter struggle has begun. Long since the tattered butterflies vanished and the stout spiders dropped from their webs, to go who knows whither. Insect life is scarce, and the birds are beginning to study the red loads that adorn hollies and haw-

thorns. The bats that used to hawk for flies at dusk, when the hedgehog was taking its walks, are, like it, asleep, the cries of the fieldfares are heard in the land, and flocks of redwings fly over ; in fact winter is here, and the hedgehog has gone down below, to be out of the way, come what may, snow, frost, or storms.

During mild spells the hedgehog will rouse itself—to be quite correct it is the rise in the temperature which rouses it—and come out for a stroll. Whether such expeditions are good for it is another matter. I am doubtful on the point, as I believe that a break in its slumber is bad for a hibernating animal. When roused to activity it draws very considerably upon its resources, those reserves of fat within its tissues, and to an extent that cannot be compensated for upon the scanty food available at this time of year. Every winter walk means the loss of that which would have kept it for weeks in an unconscious state, and it is possible that too many of such "outings" may even be fatal.

In a normal year hedgehogs, like other hibernating animals, get lively towards the end of March or the beginning of April, and come forth from their retreats much slimmer than they went in. Then they have to set to work and find food, and plenty of it, for now there is a very serious business ahead, that of love-making and mating. Somewhere under the silvery light of the spring moon, among the delicate fronds of the spring bracken, the primroses, and the early purple orchids, the hedgehog conducts its love-making, but whether silently or vocally we do not know.

The hedgehog has a voice, a very strong one too, which it can raise in a pitiable scream when in great trouble. It sounds like a child screaming ; besides which it makes a grunting noise. They say (the words "they say" are ones I always mistrust, for "they say" so many queer things !) that the badger

is the only animal which the hedgehog has cause to fear, that it can rip an urchin unrolled, skin it, and eat it in no time. In consequence of this the hedgehog lives in deadly fear of the badger, and when it sees one coming it sits down and screams. Unfortunately for this fantastic story no one ever has seen a hedgehog crying for mercy from a badger, and the only hedgehog I have placed in the presence of a badger kept very quiet. He just rolled up, and stayed rolled, and the badger, a tame one, having pricked his nose in investigating the ball, went off in disgust. Still if any creature is capable of persuading an unwilling urchin to unroll it is the badger, he has such very strong claws. Of course there is one person who can make a hedgehog uncurl, and that is the human boy ! But his method is not fair, he pops poor hedge-pig into the pond, when the urchin has to unroll in a hurry and swim. However, he can swim very well, and soon gets out of the way.

Poor hedgehog, he is such a harmless little animal in reality, yet people will not let him alone, as his poor little corpse, hanging on many a keeper's gibbet, is only too sad a witness.

A BIRD OF THE NIGHT

A BIRD OF THE NIGHT

(The Barn Owl)

A WINGED cat is that white ghostly bird which floats so silently round the buildings at night, for its profession is mouse-hunting, and on mice it lives.

A strange, weird, melancholy-looking bird, like a witch in feathers, is this owl, known as the Barn, White, or Screech Owl (*Tyto alba* Scopoli). From a ringed face look out a pair of dark eyes, with an intent peering expression, as if fixed on the dim mysteries of the future, and as if the owner saw far beyond the present. This uncanny aspect is enhanced by the large facial disc, and the way the owl has of drawing itself up very tall and slim, so that the wise head is supported on a thin body. Such is the barn owl as it looks down upon you from its retreat, a long white bird of uncanny aspect. Really it is not white, for its back and upper parts are a lovely golden-buff, each feather exquisitely pencilled with a central spot of grey and dark brown; but as it is only its silver-white under-parts which show as it faces you, and when it is on the wing, the impression made on the observer is that of a white bird, and it is as the "white owl" it is known throughout the countryside.

To come down to humble facts, it is probable that the weird uncanny aspect of our friend, that appearance of seeing through you into the far future, that

look of concentration on something far away, is due to nothing more than concentrating on mice! It must be admitted that it concentrates to some purpose. At "the edge of night," when the sun sinks, the shadows become more shadowy, and the bats rush forth, to tumble squeaking through the air for their brief hour of tumultuous life, the barn owl pulls itself together and begins to think of business. From its retreat in a hollow tree, or some quiet corner of a deserted building, it hops forth to look at the night.

By the way, the tawny, or brown owl, which is so common in our woodlands, seldom if ever *roosts* in a hole in tree or building, preferring to perch on a bough; but the white owl will always do so if it can. Therefore, when you find an owl's castings piled up in an ancient hollow tree, you may be sure that that tree is haunted by a barn owl, which likes such shelter.

To return to the barn owl that is leaving its home at "the edge of night." It will stand for a few minutes looking out at the world, at the last of the belated swallows rushing by, and the riotous bats flittering across the crimson sunset-dyed sky; it will move its head in a circle, in that quaint owl gesture, as if trying to focus the different objects better, and at last spread its wings and fly off. Ghostlike and silent it departs. There is no sound of hurrying pinions on the evening air, no rush of wings or the beat of feathers; it simply floats away as softly as a great snowflake. The broad feathers of its wings, the primaries, are very soft, like silky wool to the touch, and thus the owl's wing-beats are muffled, for the soft feathers make no sound as they cleave the air. Watching it, it seems incredible that the bird is really flying; it appears to float along, with an inner buoyancy, so easily, so lightly, does it move. Again we think of the snowflake, of thistle-down riding on the breeze, or some spirit moving by unearthly means.

There is something very uncanny about the creature.
Is it really a mere bird?

Over the farm buildings it floats, on effortless wing, and away into the meadows, bent on a mouse and vole hunt. In the grey light you will see the white object floating up the hedgeside, and then back down the other side, systematically hunting bank and ditch, flying about ten or twelve feet up, and scanning the ground critically as it proceeds slowly and quietly along. Thus it will hunt several hedgerows, but if these fail it will begin to quarter the open ground, flying backwards and forwards in the same steady persistent manner, which soon brings it the reward it seeks so diligently. Beneath it a meadow vole moves, or a shrew scuttles along its run, when down the owl drops. It behaves just like a child's kite when the string has been cut. The bird does not pounce, it simply falls on its prey. The large white object flutters earthwards, and drops, wings spread, on the grass; but beneath those outspread wings a pair of strong taloned feet have gripped the vole. Those grey feet grasp it in a deadly grip and squeeze the life from it. Then the barn owl stands up, takes the mouse in its beak, and flies off to a gatepost, or other convenient perch, to deal with its victim. The bird takes the corpse in its foot again, holds it out and inspects it critically, gives its head a shrewd nip with its beak that crushes the skull, and has another look at it, just to see if it is really dead, takes it in its beak, gives a gulp, a mighty gulp, and swallows it. The tail may be left behind, especially if the victim was a long-tailed field mouse, and if so a second gulp will be needed to dispose of it properly. After that the owl will sit with a thoughtful look, gazing across the meadows now dim and grey, to where pearly mists are creeping up from the valley, and so rest, lost in contemplation (in contemplation of the comfortable feeling that a mouse inspires when in an

owl's inside !) until it feels ready to go on once more. It takes more than one meadow vole to still the cravings of a barn owl's appetite.

I once analysed the contents of twenty-eight pellets that had been thrown up by a barn owl—like all birds of prey this owl throws up the indigestible portions of its food, *i.e.* bones, fur, and feathers, in the form of an oval pellet or casting, each casting representing one night's hunting—and found the bird had averaged four mice per night. One evening it had killed six house mice, for there were their skulls and other bones wrapped up with fur in a nice oval packet. Another large pellet when dissolved yielded the remains of two bank voles, six common shrews, and two pigmy shrews, which gives some idea of the capacity of the owl's interior. Yet the barn owl is but a small bird. Stripped of its feathers it has only a small carcass, in fact it seems to have hardly any body. Its head is the biggest part of it !

To return to the castings, those twenty-eight pellets yielded in all the remains of 112 mice, rats, voles, and shrews, besides remnants of three birds, the latter being probably tits. This, then, was the owl's record for a month of twenty-eight days.* Are we not justified in calling the barn owl a feathered cat ? It certainly is as valuable to the farmer as any cat that walks on four legs.

So far we have only dealt with the barn owl when hunting in the open, but it also keeps a careful watch on mice in buildings, especially about the farmsteads. It slips softly round the ricks, into the barns, and even the granaries if the windows be open, takes perch on some convenient beam, and waits and watches, cat-like, until the mice, little dreaming of danger, begin to scurry about—then it takes its toll.

Though the barn owl, as a species, is nocturnal, yet

* For a full account of the food of the barn owl, see my book, *Shetland Pirates* (Allen & Unwin), pages 119-122.

it is not bewildered by the daylight, and individuals will hunt by day. Many an owl have I seen hunting in the early afternoon, the sunlight winking like a heliograph from its white feathers as it beat backwards and forwards across the fields. There was one barn owl that for a long time turned out punctually at three o'clock every afternoon, nearly always taking the same beat, and when it caught a mouse taking it to one particular post to be devoured. The fact of the matter is that owls hunt prey which is chiefly nocturnal, not that they dislike the light. As for the commonly accepted idea that owls are helpless in the sunlight, that is pure superstition, as devoid of any foundation of fact as the old idea that witches rode on broomsticks. The different kinds of owls can all see uncommonly well, even in the strongest light, and they like sunning themselves just as other birds do. I once had a tame brown owl, "Old Hooter" by name, who loved to go and sit in a blazing sun and roast himself. He would droop his wings and turn his face to the light in blissful ecstasy.

Yet owls *are* nocturnal birds, especially adapted for night hunting, their large eyes, large ears, and downy plumage being obvious evidence of this. Those big eyes enable them to see the least movement, even of the smallest mouse, as long as there is the least glimmer of light. Their large ears likewise enable them to hear the tiny patterings and rustlings of their prey ; let a mouse run by, and in an instant the waiting owl is all attention. It is as quick to pick up the sound as the cat waiting outside a mouse hole, and, for the same reason, it wants the mouse.

As I have said, mouse hunting takes the owl into all sorts of buildings, barns, lofts, and church towers, to say nothing of empty houses and ruins. Now the uncanny, ghostly ways of this owl have been alluded to, but nothing has yet been said of its calls and the display it gives when alarmed, all of which are still

more uncanny, and well calculated to provide any deserted house not with one ghost but with half a dozen. Undoubtedly the barn owl has been the source of many a tale of horror and ghostly manifestations. It can snore, it can hiss, and it can screech ; the latter being a long-drawn eerie shriek disturbing to the most hardened nerves. Besides which there is its intimidating display. If a barn owl cannot get away quickly and quietly it tries what bluff will do. It droops its wings, fluffs out its feathers, and makes itself look as big as possible. It glares at the intruder, utters a long-drawn hiss, at the same time moving its head in a circle, then snaps its beak, hisses, and circles again—it is a weird and startling performance. Imagine some timid persons exploring an ancient tumble-down building, through the paneless windows of which the ivy is growing, while over its uneven floors scurry mice and rats. Imagine them getting more and more nervous and apprehensive as they move over the unsafe floors, and hear pattering footsteps about them. Imagine them opening the door of some closed room, and peeping yet more nervously into it, to see staring at them a pair of dark eyes out of a white face, to hear a dreadful hissing noise, as of escaping breath. Will it need shrieks, heard at the dead of night, to complete the ghost and make that house haunted for evermore ?

It is in a church tower, or such an old building as described above, that the white owl prefers to nest, though a hollow tree is not despised, and many a family of queer little witch-like owlets has been reared in the latter situation. Proper nest there is none, the eggs being laid on the decayed wood or such other rubbish as the situation affords. They number five or six, and are white, large, and round. The old owl begins to sit soon after the first egg has been laid, which first egg hatches in consequence a week or more ahead of the last laid, and so the owlets differ much

in size and development. Hard as the two old owls worked at mouse catching when they had but themselves to keep, they now have to work five or six times harder, and heavy indeed is the toll they take of mice, voles, and shrews.

Despite the large size of the family, and despite the fact that the owl has few enemies, it is never very numerous, never a tithe as numerous as its cousin the brown owl of the woods. This may be due to the mysterious mortality that the white owl suffers from. It is not unusual to find one of these owls lying dead, having fallen from the perch where it was resting, or dropped upon the rick where it had gone to hunt. I have examined four or five such bodies, and could not find any injury, or anything to account for the death of the birds. They were all in fair condition, plump, and their plumage perfect, nor was there any sign of disease. All the same it is to disease, I think, we must ascribe their deaths, and it is to this mysterious illness that I attribute the scarcity of barn owls in many localities where they used to be plentiful. For instance, at one time we always had a pair of white owls about my home, that made their headquarters in the pigeon loft and used the great Dutch barn as a hunting ground. We valued them too highly to interfere with or disturb them, but one was found dead on the straw in the barn, a pathetic remnant of rumpled white and buff feathers, its witch-like face yet stranger now that it was stiff and still. The other disappeared. Did it go off in search of another mate, or did it hide itself away in some corner to die quietly and undisturbed? Whatever its fate, it disappeared for good, and was never seen again. Not long ago I climbed up into the loft, and there, under the ledge where the owls used to sit, was a heap of decaying rubbish—the disintegrating pellets they had cast up—a mute witness to the good work they used to do for us, for that pile represented hundreds of house

mice, field mice, and young rats. The barn owl is not quite strong enough to catch and hold an old full-grown rat, but it can and does slay half-grown ones, and many a one too ; in fact, as I have said before, the cat on wings is the farmer's best friend, and anybody having the good fortune to have a pair about his buildings should treasure them and bless his luck.

A MIGHTY NIMROD

A MIGHTY NIMROD

(The Weasel)

No bigger in girth than a walking stick is that Nimrod of the hedges, ditches, and meadows which hunts the dwellers in the rank tangled jungle of undergrowth and herbage. A hunter by trade, his life's object the chase, he is one of the most dapper little fellows that ever laid nose to trail. But a few inches in length, still less in girth, he is clad in sandy-red, with creamy-white under-parts, including a cream "choker" right up to his muzzle, delicately furred paws, a little short bottle-brush of a tail, and last but not least, the brightest of dark eyes, which complete an outfit that makes him the smartest of the smart. Add to this a body so lithe and agile that he can slip down the smallest mouse-hole or squirm through the merest crack, which means that our dapper little friend can vanish and reappear at will, as if endowed with the gift of invisibility.

Yet it is not his lithe and graceful form nor his smart and dapper appearance which is the great charm of the weasel—for after all our mighty Nimrod is only the weasel, the little red hunter of mice and voles; who, if his quarry is but small, is as great a hunter as any man or beast that treads the earth—no, what makes him so engaging is his dark inquisitive eyes, his air of alert curiosity, combined with a light-hearted enjoyment of life. He is ever on the dance,

frisking about in and out of the mouse runs which he usually haunts.

A mischievous weasel is a joy to watch, as I thought the day I saw one making mimic attempts on some birds. The birds were wagtails. A pied wagtail, in the pretty black-and-white plumage of her kind, was running about on the lawn, followed by two young ones not long out of the nest, which were garbed in the demure grey uniform affected by young pied wagtails. They were really quite capable of catching flies for themselves, but evidently preferred that their hard-working parent should catch them for them, so they ran after her and fluttered their wings in a very hungry and beseeching manner. The old bird, imposed upon by this display of helplessness, kept catching them insects, running here, flying there, and making short dashes after the quarry that buzzed so lazily on the warm still air. Suddenly something brown flashed out of the long grass at the edge of the lawn, and the wagtails fled up in alarm, to re-alight and stand wagging their tails, in true wagtail fashion, a little way off. Again there was a flash of red-brown, and I saw it was a weasel—a weasel brimming over with life and mischief, dare-devil courage, and restraining caution, and above all with a curiosity as great as any of its tribe. It had seen me too, and sat up to have a better look, “begging” as neatly as a trained dog, erect on its hind legs, with its paws hanging down in front of it. There the cheeky little imp sat, his eyes shining with inquisitiveness, and his dapper little person exposed to view, from his white front to the spot of brown beneath his chin, which flecked his throat like the patch on the cheek of a beauty of bygone days. The sunshine caught his red coat, and burnished it until it shone like gold, but even as I noted this he was gone.

The wagtails returned to their fly catching, and out came the weasel again; but the birds were not really

frightened of him. They kept flying just out of his reach, and so the game went on, for game it evidently was, with nothing serious in it. The weasel kept making little rushes, and the birds kept fluttering out of the way. Then the hunter changed his tactics, and began dodging round the tennis pole, at which the old wagtail flirted her tail in a nervous way, chirped to her young ones, and took flight in earnest—she evidently thought that the game was getting too risky. The disgusted expression of the weasel was quite comical. He ran out to the spot where the birds had been, cast round as if trying to pick up the scent, found they were really gone, and popped back to the shelter of the long grass ; the game was over, and he returned to business, the grim business of hunting field voles, for a few moments later I caught a glimpse of him making off with a vole in his mouth *

When really bent on the chase, a weasel is deaf and blind to all else, and it hunts mice and voles with a grim determination that does much to keep these prolific rodents within bounds. No wonder the unfortunate mice quiver and try to shrink away when the patterning of strange feet is heard in their burrows. Woe to the one whose trail is picked up by the hunter. No pack of hounds on the scent of a fox was ever half so deadly as this little atom of flesh, fur, and devilment. The mouse may have bolted for dear life, but that makes no difference. With his keen nose on its trail the weasel follows—through all the turns and twists of the underground tunnels, where mouse holes run into mole galleries, and up again to the light of day, he hunts the scent. However complicated the line of that mouse, however the scent may have been crossed by other mice, he will patiently work it out, and hunt on through that labyrinth of the underground world to which the small creatures of the hedgerow have entrance. Those who enjoy sport,

* See my book, *Shetland Pirates*, pages 144-149.

those who have ridden in a fast gallop with hounds, those who have had the primitive hunter roused in them, will understand something of the entrancement and blindness to all but the chase which possesses the weasel as it runs on, now hunting slowly, now galloping ahead, taking the line from tunnel to tunnel, and finally to the upper air. We must then picture the chase being continued along the runs and highroads that thread the herbage, the hurried bewildered rush of the hunted mouse along the shadowy paths it knows so well, until, in its panic, it dashes blindly on into unknown ways; yet the relentless pursuer is getting nearer all the time, save when a break in the scent delays it for a moment. Then the weasel shows what a hunter it really is, for as a huntsman casts his hounds when they have lost the line, so does the weasel seek to recover the scent by dashing round in a circle. It is rarely indeed that he does not recover it, and dart on once more upon the line. Now it is, with the end near, that the hunted mouse will do all sorts of desperate things. Several times I have seen the chase crossing a wide road—a most fearful desert of danger and desolation to these small creatures—and instances have been known of hunter and hunted taking to the water.

Once within sight and all is over; the weasel bounds upon its victim, and with a quick bite ends its career.

It is commonly believed that the weasel and stoat can fascinate their prey and draw it to them. During many years' watching of wild life I have never seen such a thing occur, the nearest approach being the collapse of a rabbit hunted by a stoat, which seems the result of sheer paralysing terror. As far as fascination is concerned, I am convinced that, like much else that passes for natural history, it is no more than a myth.

Another common error is to confuse the weasel with its bigger relative, the stoat. The latter is larger, browner, and has a *black tip to its tail*. This last dis-

tinction is an infallible means of telling them apart. The weasel never has a black "pencil," and only sports a short plain brown tail. Besides this the two species differ much in size, the weasel being but a tiny fellow. The female weasel is again smaller than her mate, being as small in body as she is great in spirit. So much do the two sexes differ in size that at one time naturalists thought there were two kinds of weasels, apart, that is, from the stoat. However, they are now quite sure we have but one, the Common Weasel (*Mustela nivalis*, as it was named by Linnæus), which is found throughout Great Britain, but not in Ireland, though it extends eastward across Europe into Asia. It is also found as far south as the Mediterranean, and in the north to the Arctic coast. In the far north it assumes a white winter coat, no doubt to match the snowy surroundings, as does its cousin the stoat; but even then the same distinction between them holds good, for the stoat, or as we should now call it the ermine, clings still to its black tail tip, while the tiny weasel becomes white from head to foot, and from nose to tail tip.

Here, in our mild English climate, it is a very rare thing for a weasel to change its colour, and it retains the sandy-red pelage winter and summer alike. In this coat it is equally inconspicuous whether it is slipping like a fur-clad snake through the luxuriant herbage of June, or sliding about among the withered grasses, brown fern, and dead fallen leaves that carpet the ground in January.

At the latter time of year my Nimrod is a rather nomadic one, shifting his hunting grounds when sport declines, and not feeling tied to any particular spot. He often resorts to the farmyard, and takes up his quarters in some rick where rats and mice have congregated, when the sensible farmer looks upon his presence as a godsend. He is indefatigable in pursuit of the mice, which have good cause to rue his

presence, while even the rats dread the fierce plucky little hunter. He cannot quite cope with the old ones, but the young ones suit him admirably, and he kills scores of them. It is sometimes stated that weasels kill moles, and the fact that they are often caught in mole traps would seem to confirm this. That moles have cause to fear them I do not doubt, but I do question whether mole enters seriously into the weasel's bill of fare. Moles are strong-smelling creatures, disliked and despised by most flesh-eating birds and beasts, and my opinion is that when a weasel gets caught in a mole trap it was making use of the mole run for its own purposes. The far-extending subterranean workings of these little miners afford ready and safe highways for many small creatures, especially mice, which we know to be the weasel's chief support, hence it is not necessarily moles that take it down below.

So far I have not said anything about weasel kittens, which are tiny dainty editions of their little dapper parents. They are born early in the summer, in some hidden nook or corner, such as a dry hole in a bank, or beneath an old tree stump, wherein the mother has made a comfortable nest ; or else a crack in an old wall may be converted into a nursery ; while young weasels have been found beneath a heap of rubbish. In fact the nest may be made anywhere that is really dry, cosy, and comfortable.

With four or five hungry babies to supply the little mother weasel has to work hard, even harder than she does for herself, so that the mice of the surrounding banks and the voles in the long grass have greater cause than ever to fear her. You will see her taking them home, burdens nearly as heavy as herself, carrying them in her mouth, over roads and paths, up dry ditches and sheltered ways, to the family which is hidden so carefully in its snug nursery.

We certainly owe the weasel a debt of gratitude,

for it is its efforts, combined with those of the owls and the kestrel, that keep the mouse and vole population of the countryside within bounds and prevent "vole plagues." Considered individually, the field vole, bank vole, and the long-tailed mouse are charming and fascinating little creatures, but when they multiply and increase unduly, as they are liable to do in favourable seasons when their natural foes are scarce, they are appallingly destructive. The weasel has indeed his place in the countryside and in the balance of Nature, which we should never forget, and should remember with gratitude. Our mighty Nimrod, most dashing of little hunters, is doing more than the casual observer wots of when he pursues his sport through undergrowth, brake, briers, mouse runs, and mole tunnels.

A MILLION STARLINGS

A MILLION STARLINGS

IT was a stormy March evening, with dark purple clouds to the west, dull leaden ones to the east ; a cold, gusty wind, and raindrops splashing down the breeze to make little circles on the dusty lane. Before and below us lay the wood, a larch plantation on a slight bank that faced west, which by reason of the contour of the ground was well sheltered.

Making my way towards this plantation, I wondered if all I had heard about it was true, when suddenly something brought vividly before my mind a bird-dealer's shop. For a moment I did not realize what had roused the memory. There, before my mind's eye, were parrots and cockatoos, finches and canaries. Then the smell came again, and I knew : it was the odour of a bird cage, the unmistakable smell of a dirty aviary. The little cover ahead smelt of birds !

A musty, fusty, dirty odour came from it, and was brought in varying whiffs by the evening breeze. On entering the place the reason was apparent at a glance —the young larch trees were “ whitewashed ” by the droppings of large numbers, huge numbers in fact, of birds that had been roosting in them.

Exploration of the plantation showed that it was the same throughout. Incredible numbers of feathered folk had been there, and all the trees and bushes were splashed as if they had been sprayed by a lime-washing machine ; yet, in view of what I saw afterwards, I must say that the “ whitewash ” was not so great as

might have been expected from the numbers of starlings that resorted to the wood.

It was evident that the roosting birds had attracted the attention of some of the night raiders. The covert paths told many a sad story, for they were dotted with pools of feathers, where starlings had been slain. One could imagine the birds huddled sleepily upon the boughs that bent beneath their weight, and the silent owl, on his muffled wings, swooping suddenly upon them—a scuffle, a scrimmage, a disturbance in the sleeping hordes, a dark form vanishing among the trees, and silence once more, save for the murmur of twittering from the birds as they settle down again. Why should the crowd be disturbed? What is one among so many?

Or perhaps it was not the tawny owl, who likes fur better than feathers, but that desperado, the little owl. One could picture the latter at break of day, before the starlings were fairly awake, dashing into their midst, and bearing off a shrieking victim.

At any rate some raider had been at work, for I counted over thirty pools of feathers, each of which indicated the place where a starling had been killed, plucked, and eaten.

Just as the inspection was finished one lone starling hurried over on whistling wings, to be followed in a few moments by a party of five, and as I returned to my companion, waiting outside the wood, a flock of one hundred and fifty or thereabouts came over, but disappeared beyond the covert. Now small parties, from twos and threes up to nine and ten, became numerous and kept passing over. Several flocks of a hundred or so each were also seen, and some of two and three hundred apiece. We lost sight of most of them down the valley—they were coming in from *all* directions—but were under the impression that they had not gone far, and were merely flying round. Then, out of the heavy grey sky to the east,

came a much larger flock, quite a thousand to fifteen hundred birds, flying in far-extending line. As they got near the line contracted, it became a compact flock, which rose high in the sky as it neared its destination. Coming in and meeting it was another and similar flock. The two met a little short of the covert, rushed by each other, whirled past like leaves blown on different gusts of wind, swirled round an invisible vortex, mounted higher, and became one flock.

Other flocks were coming in rapidly now, and bigger flocks than to begin with. Down the darkening valley came one of thousands, rushing along with a murmur of wings like wind through the trees, the birds as specks against the pallid sunset sky that gleamed between the storm-clouds, from which spots of rain splashed on my face as I watched them go by. A huge concourse was now swinging to and fro on the other side of the wood, wheeling and whirling in slow, strange evolutions, like smoke blown about by the wind. Watching the smaller flocks, one was impressed by the individuality of the component birds ; you saw ones and twos separate and go their own way, rejoin the party, and leave it again. They were not so enthralled by the flock that they could not leave it when they wished. Even with the moderately big flocks one was aware of this independence among the units, and that the flock movements were by no means unanimous ; but when one watched the largest flock one ceased to notice what individuals did. The mind was dazed by numbers. One seemed to be watching a single thing, a vaporous being, an animated cloud, that spread and lengthened into a long, dark shape, stretching in sinuous snake-like folds ; drew together, and contracted to a quarter of its length ; burst asunder, swung and twisted to and fro before becoming one again.

This enormous gathering now absorbed all the

incoming birds. A party would arrive, winging their way in the usual starling hurry across the darkening face of the country, and swing over the wood, drive past the mighty gathering, one stream going one way and one the other, swing round and towards it, like a needle drawn to a magnet, and vanish into it. The great concourse continued to wait in mid-air, all the time wheeling in airy evolutions, sometimes drifting half a mile down the wind, and anon coming back up it. How many birds there were in the flock it was impossible to say, estimate was hopeless, and eyes and brain reeled before the attempt at computation. They were like sands upon the seashore—innumerable! And still, in the fast gathering gloom, the concourse swung overhead, sometimes coming close, with a murmur as of the roar of the sea, sometimes drifting away, and even then its numbers were being added to. It was quite the "edge of night" when there was a great rush of wings, and yet another immense flock came in. It went by and under the main gathering, rose, and was swallowed by the great flock. *Now*, how many were there? Well, if a guess must be made, not less than a million birds—perhaps double that!

It was the largest gathering of birds that I had ever seen.

Whereas, to begin with, the starlings had swung to and fro over the countryside, the deepening twilight saw them making the wood the centre of their evolutions. At every turn they got nearer and lower, swooping down with a mighty roar of wings, like the rushing of a great wind, towards the trees, only to swing upwards again, but not so high as they had been before. Yet it seemed as if they would never actually settle, though it was now almost dark. We could not see them against the trees, and only dimly against the sky. Then there was another roar, now like waves crashing on a rocky shore—part of the

flock had alighted ! But up into the air went the dark cloud that represented the greater part. It swung round, grew denser, and darkened in the middle, which dark part sagged downwards, like a waterspout forming from a rain-cloud, dropped yet lower, and swept down upon the wood, just as if the cloud had burst. Another roar smote upon our ears, many thousands of starlings had alighted, but many thousands more were still on the wing. The greater part of the mighty flock gathered itself together and swung up—really it showed no perceptible diminution !

Up and down, round and round, and up and down yet again ; so it went on. Would they never get down ? We grew cold watching in the chill dusk, or rather in the dark, for it was now practically night ; but the crash of descending starlings at last smote more frequently on the ear, for at each slow swoop (the flock did not appear to move fast) thousands dropped into the trees, when the roar of their wings and the noise of the swaying trees echoed through the night. Once there was confusion, starlings dropping earthwards checked themselves and turned back into the flock above them. Up they all went once more, and then down with a rush and a last roar—this time they were really gone.

As we went away we could hear behind us a dull, soft murmur from the darkness of the little wood, hundreds of thousands of starling voices twittering in the night.

On my next visit to the starlings' roosting-place the birds behaved quite differently, but it was a calm grey evening, the weather being of the "easterly" type, with the sun sinking like a crimson ball to the north-west. This time the birds assembled in the meadows near the wood, or else flew straight into the covert. There was no "waiting on" overhead, but on this still, quiet evening the noise the birds made was even

more startling than before. One flock had descended on a field behind the covert, ewes and lambs running away in fright as the starlings alighted and spread in a black swarm over the turf. Every time this gathering moved a roar smote the evening air, not unlike the booming of distant guns.

I had taken shelter under some bushes by the wood, and a few moments later starlings began to pour over me like water down a waterfall. They swung round over the larches, did one revolution, and shot down like a cataract into the thorn bushes outside the covert. The bushes became black in a moment. Another roar, and another flock poured in, only to be followed by a third. For a few moments the air was full of birds, when, with a yet louder roar, they all descended. More came, and those that had already alighted shifted their position, a rush of wings being heard each time they moved. They were converging upon the wood, and all the time starling voices were making a pleasant din of chirping. More came, and yet more, until it was practically dark, when, leaving my shelter, I went round the covert. Bushes and trees were packed with birds, silhouetted in black masses against the last faint glimmer of the sunset.

Once, twice, thrice I clapped my hands, and the nearer birds rose with a mighty rush in the darkness, only to alight a little farther off. But there was no general panic, and the alarm did not spread, so, turning, I stumbled away through the bushes, and left the great gathering in peace, wondering as I did so where they could all come from, for it seemed incredible that there should be so many starlings in the west of England, let alone in one district. What, too, had brought them to the wood? They had appeared suddenly, and suddenly they went. A few weeks later they vanished, the covert was deserted, and it knew the hordes no more.

Before they left I had the pleasure of watching a

portion of the concourse feeding on a meadow. Looking over the fence I saw the field black with starlings, all the birds searching busily, starling fashion, in the grass. Each one was parting the blades of grass by thrusting its beak between them, and opening the mandibles when it peered down into the roots, where hidden grubs were quickly spied. Thus they worked, one and all, at the same time chirping and talking, so that a "charm" (to use the country word) of bird voices rose upon the air.

The concourse was in motion all the while. Each individual was hunting and running forward at the same time, besides which birds, that were apparently dissatisfied, kept flying ahead of their neighbours to get to grass that had not been searched. Starlings at the rear of the flock kept taking wing and flying to the van. Three or four would get up, to be instantly followed by others, and for several minutes they would stream over the main body. There were also side to side movements, parties shifting from right to left of the main body, and vice versa. In every case these movements were initiated by one or two birds, the others following in a stream, and I saw no really simultaneous movement, not even when a very large portion of the flock took wing. A few starlings rose and flew on to a tree, when others followed them, and were followed in their turn, until trees and fence were bowed down by the weight of birds. These details are mentioned because some persons think that flock movements take place simultaneously, by means of thought transference or mind waves. I can only say that it does not seem to be the case in a starling gathering. What I did see were frequent examples of that most deep-seated of all impulses, which is to do the same as your neighbour does, and follow when he moves suddenly.

Reverting for a moment to the flock at work upon the turf, how many were there? Estimating the

space they covered at 100 yards by 70 yards, and putting four starlings to the square foot—they were shoulder to shoulder in most places, and were probably seven or eight to the square foot—we have thirty-six to the square yard, or $36 \times 100 \times 70 = 252,000$. This was a most moderate estimate, both as to the number to the square foot and the total area occupied by the flock. Now if these birds only got three insects apiece while I was watching them, then I witnessed the destruction of 756,000 grubs ! While, as to what they would consume in a day, well, my arithmetic reeled at the thought of it, and collapsed altogether when I recollect that the birds before me were but a fraction of those that met nightly in the little wood. What would it take to keep them all ? A million or more starlings, at a hundred or more grubs per head per day—I leave the reader to work it out !

If so minded, he can further work out the number of insects those starlings would require to keep them for twelve months.

At times the Starling (*Sturnus vulgaris* Linn) makes itself a nuisance by eating newly planted grain, but when we think what a flock like the above can achieve in the way of insect eating, such lapses from good behaviour may be excused this hard-working bird.

BIRD-WATCHING IN THE RAIN

BIRD-WATCHING IN THE RAIN

THE woods seem a sea of greenery—damp, warm, almost steaming greenery—on which the rain patters gently and steadily as I sit on a fallen tree waiting and watching. On the left is a great yew, a red-trunked, dark, aged tree, in the creviced stem of which is a tit's hole, wherein, for many successive seasons, lively families of little tits have been brought up. The nest is obviously in use now, but though I wait patiently no tit appears. Perhaps she is yet sitting on her spotted eggs at the bottom of that gloomy hole.

A blackbird flies over, a kestrel chatters somewhere in the trees behind me, a thrush sings as only a thrush can, and a pompous, self-important mistlethrush alights in a tall oak, and, catching sight of me, proceeds, in no complimentary language, to say what it thinks. Still shrieking abuse it flies off, and its chattering dies away down the wood.

The thrush continues to sing ; some rooks, evidently a family party just off from the big rookery, caw hoarsely in the trees, and their raucous conversation comes harshly across the thrush's song. A small rabbit appears, seemingly from nowhere—a few moments ago there was nothing there, and now it is sitting looking at me but three yards away. Its dark eyes regard me steadily, then suddenly, with a thump, a warning thump, of its heels, it turns and flees. Its white tail bobs for a moment through the under-growth, and then it is swallowed up in the sea of briars and fern.

Getting up from my tree I stroll on, the wet bracken and brambles dripping water against my mackintosh, and the overhanging boughs pouring rivulets upon my hatless head ; but there is a joy in the warm rain, and this wet woodland world, so full of life and interest.

Here is a rotten old birch tree, beloved by the woodpeckers, who have riddled it in search of grubs. Beyond is the badgers' earth, the wet clay before the holes bearing the impressions of the owners' feet. Countless seedlings have taken root in this loose soil, but already they are bruised and bent by the nightly trampling of heavy pads. Those same feet have worn highways through the undergrowth, roads along which the badgers travel on their journeys to and from the "sett," beside which littered fern and grass tell of their bed-making activities, and how, under the light of the moon, they have been busy getting material for a cosy nest.

Leaving the badgers' earth, I pass out of the wood into a bracken-clad open space ; but, though I stand and watch for some minutes, there is nothing to be seen—save a hedge-sparrow flitting across to the wood and a rabbit hopping the same way. The rain patters steadily on fern and brake, and I seek again the shelter of the trees.

Here there is a piece of marshy ground, with big oaks on two sides, some blackthorn bushes and briars on the other, and an open glade at its head. Walking quietly under the oak trees, where the ground is sound and dry, I am aware of many flutterings and twitterings, of many little voices, as of little people around me. Looking about, into the low-growing bushes and into the trees overhead, I am aware of many little creatures, and see that the bushes are full of feathered life. First there are two robins, gazing with beady, inquisitive eyes from the undergrowth, perkily questioning this invasion of their privacy ; but

the many little twitterings and tiny voices were not theirs, it is long-tailed tits that I have heard. The trees and bushes seem full of the mites, flitting here, there, and everywhere, hunting ceaselessly for grubs, now peering into a leaf, now hanging upside down to study the underside of a twig, but ever on the move. Really there cannot be more than fifteen or sixteen of them—*i.e.* the parents and thirteen or fourteen youngsters—but with their restless activity and incessant movement they seem multiplied manyfold.

Taking a step or two forward to get a better view of their activities, I am startled by a largish bird flying up at my feet, which darts off with a peculiar zigzag flight, dodging and swaying through the trees in a manner that betrays it for what it is, namely a woodcock. Hardly has it disappeared than another woodcock jumps up and flies away after the first. From the manner in which they fly I feel sure they have young ones, and proceed to search the oak-leaf covered ground in an effort to find them. But if they are there they are too well hidden for me to see them, yet it is not long since a pair of woodcock hatched out a clutch of chicks near this spot, and only a day or two ago I heard the old birds giving that peculiar booming call, like a bull roaring—it is a most intimidating sound—which they utter when burdened with family anxieties. But find the chicks I cannot. Perhaps I am overlooking them, which may easily be, for they bear the most wonderful likeness to the ground upon which they crouch when alarmed, or maybe the beautiful red-brown chicks have been drowned in the recent heavy thunderstorms. Such tragedies do happen in wild Nature.

Returning to the tits—they are still busy in the bushes, paying no attention to me, but going on about their business quite near. Fascinated, I watch the fearless mites. Such wee bundles of feathers and

vitality, and the daintiest of creatures in their delicate greys, dark greys, and browns, with their long tails distinguishing them from our other tits. They flit and flutter, pausing now and again to shake the rain-drops from their feathers, but they do not get wet, or even damp, for the water rolls off their well-kept plumage. Tired with bustling to and fro, two of the mites draw together, cuddle up to one another on a twig, and sitting like two little love-birds, preen their feathers cosily, side by side. Still closer they cuddle, seeming to doze, but a moment later their tiny bright eyes are winking, and they are on the move once more. Judging by the glossy, unworn state of their feathers, these are two young birds. A tit with decidedly worn feathers must be one of the parents. Well, the care of fifteen or so babies must be wearing ! No wonder the two little old birds look shabby ! Query, how do the parents manage to keep such a large family fed ? In an earlier chapter I alluded to the terrific work this must be, but it is probable that the tiny green Oak Moth (*Tortrix viridana*) helps to solve the problem. On this occasion and on others, I have seen the tits busy picking off its tiny green caterpillars, which infest the oak trees in such numbers that in some seasons the trees are stripped of foliage.

The sight of the large tit family raises another question. How was such a family ever reared in the nest's limited space ? Only the young tits themselves can answer that ! It must indeed be a squash ! Once, when trying to draw aside the branches of a bush to get a look at a long-tailed tit's nest, I inadvertently shook it. The youngsters, who had been on the point of quitting home, immediately tumbled out. There was a cascade of young birds ; they just poured out of the nest, and no conjurer's hat ever seemed so inexhaustible. Why the beautiful domed nest had not burst I cannot understand.

Among the tit family I am watching I suddenly spy



Two of the mites draw together.

a short-tailed thicker tit, which, turning so that its markings are revealed, shows itself as a black-capped marsh tit. Or is it a willow tit, that new species which has been carved out of our familiar marsh tit? The willow tit has a bigger and more velvety cap, and this bird might well be one. It slips away from the long-tailed tit family, and flies across the swamp to where some sallow bushes are a mass of fluffy seed, which even the rain cannot damp. Working my way round the swamp, I try to keep an eye upon the tit, which has fluttered up to the top of a high oak, where something else is moving, a tiny fragile green-grey bird that is flitting from twig to twig—a willow warbler, or willow wren, also hunting oak moth caterpillars. Even smaller and more fragile than the tits, I never see one of these little warblers without wondering how it manages the long migration journeys, how such a fairy-like delicate little thing can wing its way for thousands of miles over land and sea to warmer winter quarters, and find its way back over the same long route in the spring. As if to emphasize its fragility, the wee bird hovers for a moment at the end of a bough, picks something from the outermost leaf, and brings tumbling about it a heavy downfall of water drops from the leaves. The shining drops shower round it, but it darts through them, flies to a twig, gives itself a good shake, and flits off to look for more caterpillars.

The willow wren having gone, I move once more, and almost step upon a hen pheasant. She flounders up at my very feet, rising from the rank vegetation of the swamp with a great commotion. Something runs into the grass, and something else into the bracken—two chicks, about as big as blackbirds, and no doubt there are others, but I step discreetly aside, for it is no use disturbing the family.

The noise of the hen pheasant rising brings two robins to inspect me, for their insatiable curiosity

makes them inquire into everything. The one perches on a meadowsweet flower, where, with its red breast and brown plumage, it makes a charming picture against the tangled herbage behind it ; but daintier still is yet another willow warbler, which is hawking for insects round a blackthorn bush, looking so small and fragile that one feels the raindrops will wash it away. Towards the end of the boggy glade, to which I now make my way, there are more small birds ; a pair of whitethroats slipping furtively about in the tangle of hemp agrimony and fleabane, whence their scolding chatter betrays them ; and another wee thing in feathers, namely a lesser whitethroat, in its delicate pearly grey. Like a feathered mouse it slips through the tangle, past its scolding, larger relatives, and up into the blackthorn bush, where it stays for a moment poised on a twig. The rain is stopping now, there is a break in the heavy clouds, and a weakly gleam of sunshine comes through the trees. Its ray catches the tiny bird, and the bedewed foliage round it, from which prismatic colours flash as if the leaves were hung with diamonds. So it stays for a moment, then it is gone, showering glittering drops behind it.

With that last picture to remember I turn and trudge home across the sodden meadows.

A VERY MEEK CREATURE

A VERY MEEK CREATURE

(The Badger)

THE shyest and most retiring of all our mammals is that creature of mystery, the Badger. A beast of the night, seldom seen, retiring by day to the innermost recesses of the great burrow in which it lives, no wonder that stories, myths, and legends have clustered round it, or that it has been invested with a character for ferocity at utter variance with the facts, to say nothing of a reputation for scarcity that is also misleading.

The badger is really fairly plentiful, but it is very shy, and to find the dwelling-place of *Meles meles* Linn. you must resort to the great woods and thick dingles where the wild creatures hold sway. Here, on some sheltered bank, where overhanging trees and dense bushes keep the woodland peace, you will find the badger's earth, or "sett." The entrance holes are marked by heaps of soil, barrow-loads, nay cart-loads, of earth lying before them, and telling of the excavations that have been undertaken below, and the shafts that have been driven into the bank. As a digger, the badger is unsurpassed, save by that professional miner, the mole. Powerful of body (a female badger will weigh from fifteen to thirty pounds, and a male from twenty to over thirty or even more), strongly built, with most excellent feet and claws, to say nothing of the energy that distinguishes the weasel

tribe, the badger is well fitted to dig and delve, and dig and delve it does. Each time you visit the sett you will find evidence of its energetic doings, fresh soil lying on its doorsteps, besides a considerable litter of fern and grass—old discarded bedding that has been cleared out and thrown away, and new nest-making stuff that has been dropped as the badgers were carrying it home. But whatever they may have let fall, we can be sure they have taken plenty inside, and that somewhere far underground there is a well-made, clean, dry bed, in which the owners of the sett are curled comfortably up, for badgers are the most particular of creatures with regard to their couch.

Further signs of what goes on during the dark hours may be seen in the well-used footpaths leading to and from the great earth ; paths worn bare by the traffic of padded feet, but upon which human boots are never placed. On these paths, when the weather is damp enough, you will find the imprint of the feet that have passed in the night. Once recognized, the badger's pad mark is unmistakable, so characteristic is the broad hind pad, the evenly spaced toes, five altogether in number, though as a rule only four make a mark on the mud, and the deeply cut claw marks. By this footprint you may trace the badger's nightly doings, its wanderings by woodland rides and meadow paths, and trail it into places where you would little dream a wild creature would go, such as gardens and along quite frequented ways. Under cover of darkness and when we are safe in our beds, the badger is not quite so shy. Then it holds its revels and its orgies, digging out wasp nests regardless of the angry occupiers, so that the morning light will show but an empty hole where overnight was a well-populated wasp citadel ; or laying bare a rabbit nursery and devouring the young ; or merely contenting itself with frog-hunting in a marsh, and with such grubs and beetles as it may come across. But before daybreak, nay before the

slightest hint of dawn is paling the eastern sky, it is off home, and is underground before the human world is stirring. Seldom indeed is a badger seen abroad, and I must admit, though I have watched many times beside a badger earth in the early morning, I have yet to see one return to the sett ; however, I have seen them leave it at night, though only after keeping many and many a fruitless watch.

It is a strange and eerie experience to wait and watch in the hope of seeing these shyest of shy creatures come forth. It is necessary to take up your position before sunset, while the world is yet quite light ; and, having chosen the spot whence you are going to watch, you must not on any account move again. You must stand as still as possible, for preference by some tree, as I did one evening. It had been a lovely day, and was a glorious evening, the air being still and warm—so calm, indeed, that the stillness was almost uncanny, it was oppressive, one could feel it—and the rustling footsteps of little creatures in the surrounding bushes seemed to emphasize the quiet. The small sounds seemed to make the calm the more intensely silent. Yet really the woods were not silent, they were full of life, of little movements, here, there, and everywhere. A rustling on my left, that came on steadily, was probably a toad out walking. A quicker rustle on the right, a wee shape dashing by—that was a long-tailed mouse leaving home for its night's foray. Through the twilight, now fast darkening, came the comparatively loud footsteps of a rabbit hopping over crisp leaves, after which one could pick out the soft footsteps of many small scampering creatures. It was as if the woodland was alive with dancing elves and sprites ; and with the darkening shadows one's eyes began to play fantastic tricks, so that one could almost see them too.

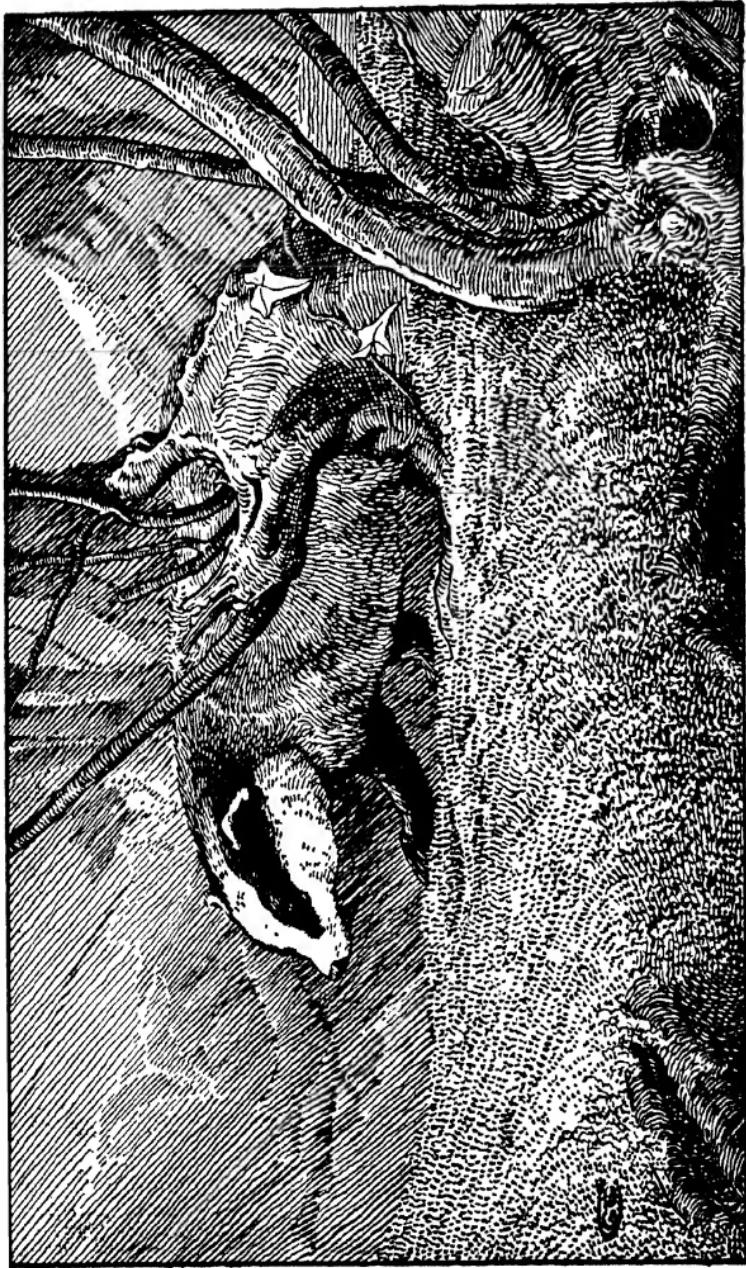
Next a snipe bleated, an eerie sound through the trees. It was evidently circling overhead, and drum-

ming as it did so, alternately giving a fussy "Chuck ! chuck !" call. No doubt it had come from a marshy meadow near at hand, for its drumming died away in that direction. Hardly was it gone than there was a croaking note from high over the trees, a croak that ended in a wheezing squeak. This told me that the "edge of night" had really come, for it was a wood-cock taking its evening flight. Round and round it went, croaking all the time, and then an owl hooted his long drawn "Hoo-oo-ooo!" Yet for all these sounds of life, these cries and calls, the quiet of the brooding woods seemed more intense than ever. Had one not been at home among it all, had one not known each twig and stone, and what each little creeping sound signified, it would have been nerve-racking work standing motionless there in the gathering gloom in that whispering peace. Though so still, the woods were alive, alive with wee shy things ; but it was friendly life, so different from the spooks and pixies of man's fevered imagination.

All the time I was staring with straining eyes at the mouth of the badger sett, which showed as a black smudge against the faintly white heap of soil in front of it. There was quite a platform of beaten earth, the fruit of much tunnelling underground, and of many "spring cleanings." To the left of the hole ran two well-trodden paths, also showing faintly white in the dark, the highroads by which the badgers went out and returned each night, besides which there was a track from the entrance I was watching to the other that was now invisible.

Several times I thought I heard something. Was it a rumble up the hole? Was it a whimper, as of quarrelling? I was tense with watching. Did that shadow move? No; my eyes were merely playing me tricks. Suddenly my heart gave a great thump—there was a striped face looking out of the gloom!

That was the order in which the events reached my



A striped face looking out of the gloom.

conscious mind : a thrill of excitement, and then realization that a badger was out.

On this and on other occasions the badger made its appearance absolutely silently, and the quietness with which wild badgers can move must be seen to be appreciated. It is customary to speak of the badger as a "clumsy beast"; but it is not so in reality, it can move swiftly, and as silently as a shadow.

Another night I kept watch in such a position that I could see the badgers going backwards and forwards along a ridge of ground, where they were silhouetted against the sky like shadows on a screen. It was a curiously unreal effect. They went to and fro, smelt here, scratched there, and with never a sound save when they turned over the dry leaves that carpeted the ground. It was on the evening in question that one of the badgers nearly walked into me. I was sitting in a little hollow, my back against a tree, and one of them turned and came towards me. I could just see its striped head as it came down the bank, evidently hunting among the undergrowth for small game, such as insects. As it came nearer its big grey body was clearly visible, and it got closer and closer. The impulse to jump, to utter an exclamation was strong; but I did not stir, I managed to keep perfectly quiet, and it came within a couple of feet of me, when it swung round and trotted back. That badger never knew how close it had been to a human being!

But for a real thrill, as I have mentioned in an earlier chapter of this book, it is necessary that a badger should scream near to you. As said elsewhere, a badger can utter a sound so awful and agonized that it cannot be compared with anything else on earth; and when this dreadful scream arises in the dark, close at hand, it makes every nerve jump and quiver. One night, as I waited, I saw a shadowy form come forth from the earth, seat itself, as if to contemplate

the evening, upon the platform before the hole, and there stay for some minutes. Suddenly the badger got up, vanished into the dark shadows, showed up again beyond for a moment, only to slip into the gloom once more, and then—oh ! it was a blood-curdling yell ! Time after time that badger called, repeating the cry as it made its way down the wood. If a love song, and so I believed it to be, then it was enough to frighten its would-be mate out of the countryside ! It is only in the autumn that badgers raise this woeful din, and I have never heard their lamentations after Christmas.

So far no explanation has been given of the title of this chapter—"A Very Meek Creature." If one believed all one heard about the badger one would conclude it was a ferocious and dangerous animal. Now it certainly *is* a powerful creature, of substantial build, with a strong jaw, and a splendid outfit of teeth. No beast can inflict a more severe bite when compelled to bite in self-defence, as, for instance, in the days of badger baiting, when an unfortunate badger was put in a tub, and terriers were set on it to try and draw it. Then it bit, and bit with a vengeance. So, too, it still does when badger digging is practised, that is, when touched by man or dog, for, to use an Irishism, its attack is a defence. With head sunk between its paws, so as to protect its vulnerable chest (it can take any amount of punishment on the head and shoulders), it awaits those that like to go at it, and woe to them if they get within reach of those jaws ! Yet it *is* a meek beast. Never does a badger seek conflict, but always avoids it. Live, and let live, is its motto. And even when captured, frightened, and bewildered, it merely backs into a corner and tries to hide itself. Such a thing as a badger "flying" at a person is at utter variance with its character, but when driven in self-defence to bite it can inflict a terrible wound.

If a badger were animated by the ferocious spirit of a mole or shrew, then, indeed, it would be a dangerous creature, and our woods would not be safe to walk in. Instead it is shy meekness personified, and should it meet a person, it bolts for dear life, to take refuge in its earth. Perhaps it is its shyness which has enabled this last of our truly wild large carnivores to hold out, for its foes are many ; keepers, rabbit-catchers, and Masters of Hounds all kill it when they can, their chief reason being prejudice, and that desire, which is only too common, to slay any large wild animal. Nevertheless the badger thrives, and wanders nightly across the countryside after the odds and ends in which it delights—grubs, carrion, wasp nests, young rabbits, earthworms, slugs, etc. ; and the naturalist says, Long may it do so !

Beginnings

Crown octavo.

Cloth 5s. net.

The Publishers asked a number of writers of fiction who have made reputations in the last few years to answer the question, "How did you first begin to write?" The result is this most entertaining volume.

Some of the authors—Dr. A. J. Cronin, for instance—give a straightforward but amusing account of how their first novels were written. Miss Helen Simpson explains how she wrote hers because she expected to be "ploughed" in her Final Schools at Oxford. Mrs. Malachi Whitaker and others write of patient experiment and the thrill of the first contact with the publishing world. Miss V. Sackville-West, Mr. Louis Golding, Mr. V. S. Pritchett, Mr. L. A. G. Strong, give picturesque autobiographical accounts of their early ventures. Mr. A. E. Coppard, past master of the art, discusses the technique of the short story. Mr. Wyndham Lewis deals with the particular problems of the author who is also and equally a painter. Mr. Alec Waugh explains why he published no novel for five years after his first success with *The Loom of Youth*. And so on.

The book has more than entertainment value; it has great interest for all readers of contemporary fiction—and all aspiring writers.

"The subject has been approached from as many angles as there are authors. A delightful mixture of the humorous and the serious."—*Morning Post*.

Argosy Books

Cloth gilt.

3s. 6d. net.

A new series of books of enduring value and appeal—slim octavo volumes which are comely on the shelf and comfortable in the pocket or the rucksack. They will include fiction and general literature, books which have already won favour at a higher price and others which make their first appearance in the series.

They are beautifully produced, and strongly bound in a fine quality Sundour cloth, fadeless and washable, with tinted tops and titles blocked in real gold.

The publishers will be pleased to send particulars of new volumes as they appear.



i. PRESTER JOHN

by John Buchan

An attractive edition of one of Mr. Buchan's finest stories—a novel without a woman in it!—which is taking its place beside *Treasure Island* among the masterpieces of romantic fiction.

Argosy Books

Cloth gilt.

3s. 6d. net.

2. MODERN ESSAYS AND SKETCHES

edited by J. W. Marriott

Twenty-eight well-known writers, from Max Beerbohm and E. V. Lucas to J. B. Priestley, E. M. Delafield, and Ivor Brown, are represented in this charming collection, which shows the modern essay in many styles and moods.



3. WILD LIFE STUDIES

by Frances Pitt

Illustrated by G. E. Collins

Miss Pitt writes with understanding as well as knowledge of the many wild creatures which she has watched in their native haunts—badgers, kestrels, dormice, starlings, grey seals, owls, hedgehogs, and puffins among them. This is one of her most fascinating books, with exquisite pen-drawings by a well-known etcher.

Further volumes are in the press.

Science : A New Outline

J. W. N. Sullivan

Fully illustrated from photographs and drawings

Large crown octavo.

5s. net.

A new survey of modern science in all its branches, a masterpiece of exposition for readers with no training in science or mathematics. It is stimulating reading, for Mr. Sullivan not only presents concisely but graphically the scientific knowledge which is essential to every intelligent man and woman to-day—he enlarges our view of life and the universe.

“AN EXCELLENT INTRODUCTION to the physical and biological sciences . . . in touch with all the latest developments.”—*The Times*.

“This book takes us to the present limit of physics, and it does so WITHOUT USING A SINGLE MATHEMATICAL FORMULA. The newer and still newer story is told with a simplicity which never fails, and when abstract words lose all their common sense, then one after another run out similes and metaphors as simple and as telling as parables.”

—GERALD HEARD (*The Sunday Times*).

“His simplicity gives breathing space to imagination and wonder. . . . FOR MR. SULLIVAN AND HIS READERS SCIENCE IS A LIVING THING.”

—KENNETH RICHMOND (*The Observer*).

“Very successful, very attractive to read. IT TELLS THE LAY READER JUST WHAT HE MOST WANTS TO KNOW.”—SIR ARTHUR EDDINGTON.

Modern Drama

by J. W. MARRIOTT

Drama in England, Europe, and America from the late nineteenth century to 1934 ; a guide to all the most interesting plays and playwrights. "Bringing a sympathetic understanding to all forms of drama, Mr. Marriott ably discusses the giants, such as Shaw, Galsworthy . . . and all modern tendencies."—*Manchester Guardian*. "An extremely well-written and well-balanced survey."—*Referee*. "Sane, far-ranging, and pertinent."—*Daily Herald*. (The "Little Theatre" Series.)

Cloth gilt, 5s. net.

The Amateur Actor

by FRANCES MACKENZIE

*Organizing Director of Drama Schools
British Drama League*

This thoroughly practical book is based entirely upon the author's own experience on the professional stage and in conducting classes for amateurs. She deals with all the most important problems, artistic and technical, including speech, movement, gesture, the creation of atmosphere, working to a climax, entrances, exits, falls, etc., etc., and provides a fascinating series of exercises which enable the amateur player to master the elementary technique of acting, and which will be equally valuable to the producer who has to coach his players. There is also a remarkably good chapter on stage management. *Illustrated. Quarter cloth boards, 2s. 6d. net.*

Fifteen Modern Plays

Edited by JOHN HAMPDEN

Little Glass Houses (*Philip Johnson and Howard Agg*)—The Confutation of Wisdom (*F. Sladen-Smith*)—Kirkconnel Lea (*Gordon Bottomley*)—Unnatural Scene (*Kathleen Davey*)—The Unhappy Clown (*John Bourne*)—The Eye of the Beholder (*Cyril Grainger*)—The King Decides (*John Hampden*)—Pandora's Box (*Rosalind Vallance*)—The Spell (*Mary Kelly*)—The Dickens of Gray's Inn (*H. F. Rubinstein*)—Old Moore's Almanac (*John Pearmain*)—A Man of Ideas (*Miles Malleson*)—The Spinsters of Lushe (*Philip Johnson*)—The Theatre (*H. F. Rubinstein*)—Wayside War (*Margaret Napier*). Acting Notes.
Cloth gilt, 3s. 6d. net.

Ten Modern Plays

Edited by JOHN HAMPDEN

Thirty Minutes in a Street (*Beatrice Mayor*)—The House with the Twisty Windows (*Mary Pakington*)—Colombine (*Reginald Arkell*)—Moonshine (*Arthur Hopkins*)—The New Wing at Elsinore (*St. John Hankin*)—Mrs. Adis (*Sheila Kaye-Smith*)—Tickless Time (*Susan Glaspell*)—X = O (*John Drinkwater*)—Elizabeth Refuses (*Margaret Macnamara*)—Brother Wolf (*Laurence Housman*). Commentary. Acting Notes. Two Stories for Dramatization.
Cloth gilt, 2s. net.

Little Plays from English Drama

Edited by ROSALIND VALLANCE

Sir Peter's Match (from Sheridan, *The School for Scandal*)—The Rivals Meet (from Sheridan, *The Rivals*)—The Mistakes of a Night (from Goldsmith, *She Stoops to Conquer*)—Comus (abridged from Milton)—Shoemaker's Progress (from Dekker, *The Shoemaker's Holiday*)—Doctor Faustus (abridged from Marlowe)—The World and the Child (abridged, Anonymous). With full stage directions, acting notes, etc., and illustrations of costumes. (No. 127 of the "Teaching of English" Series.)

Cloth gilt, 2s. net.

Ten Elizabethan Plays

*Edited, with an introduction and notes to each play
by EDWIN JOHNSTON HOWARD*

The Spanish Tragedy (*Thomas Kyd*)—Tamburlaine the Great (*Christopher Marlowe*)—The Tragical History of Dr. Faustus (*Christopher Marlowe*)—The Honourable History of Friar Bacon and Friar Bungay (*Robert Greene*)—The Alchemist (*Ben Jonson*)—The Shoemaker's Holiday (*Thomas Dekker*)—The Knight of the Burning Pestle (*Francis Beaumont and John Fletcher*)—Philaster (*Francis Beaumont and John Fletcher*)—The Duchess of Malfi (*John Webster*)—A New Way to pay Old Debts (*Philip Massinger*). A representative collection invaluable to the student and lover of Elizabethan drama, and to the amateur actor. Introductions and notes to every play. (For separate editions of several plays see the Nelson Play-books.)

Large crown 8vo. Cloth gilt, 7s. 6d. net.

The Youngest Omnibus

Conducted by ROSALIND VALLANCE

Illustrated by Ruth Gervis and Honor Appleton

700 pages. 200 pictures

This delightful book, which is beautifully printed in large type, contains stories and poems by A. A. Milne, Walter de la Mare, Arthur Ransome, Hugh Lofting, W. B. Yeats, Richard Hughes, Katherine Mansfield, Rosalind Vallance, Rose Fyleman, Rhoda Power, Amabel Williams-Ellis, Marion St. John Webb, Humbert Wolfe, Eleanor Farjeon, and every well-known modern writer for children.

It includes also the following plays :

The Cat on the Dovrefell (*P. Laflin*)—The Play of Red Riding-Hood (*Rosalind Vallance*)—Three Billy Goats Gruff (*P. Laflin*)—The Three Bears (*E. Harcourt Williams*)—The King and Queen's Daughter (*Harriet Clark*)—Eleven and Twelve by the Clock (*Anne M. Trotman*)—On the Lawn (*Hugh Cushman*)—The Travelling Man (*Lady Gregory*)—Christmas Pies (*Anne M. Trotman*).

"One of the most attractive collection of poems, plays, and stories for young people yet produced."—*Library Review*. "One of the most fascinating books for the younger children that could be imagined."—*British Weekly*. "Will delight all six to twelve year old readers . . . commended for its many pages and clear print."—*Daily Telegraph*. "Miss Rosalind Vallance has done her work as editor admirably, and has produced a really charming volume."—*The Scotsman*. "A delightful compilation."—*Sylvia Lynd (Book Society News)*. "Splendid."—*Sunday Times*.

Large demy octavo. Cloth, 7s. 6d. net.

CHOSEN BY THE JUNIOR BOOK CLUB

Mimes and Miming

By ISABEL CHISMAN and GLADYS WILES

A book for beginners as well as those who have already discovered the delights of miming. It shows *exactly* what to do, and besides chapters on miming it contains fourteen mimes, ranging from carols to farce, the casts of which can be easily increased or decreased if required. Stage plans, music, etc.

Carol : We Three Kings of Orient Are. *Simple Mimes with Chorus* : The Babes in the Wood. The Sleeping Beauty. *Songs and Folk-songs* : Billy Boy. The Wee Cooper o' Fife. The Wraggle Taggle Gipsies, O. *Prose Mimes* : Gabriel Grub. The Swineherd. Bluebeard. The Jester. *Miscellaneous* : The Romantic Woong. The Pest. *Ballads* : Sir Eglamore. Binnorie. No acting fees.

Stiff paper covers, 2s. 6d. net.

Ballads and Ballad-Plays

Edited by JOHN HAMPDEN

This unique book provides an introduction to drama, mime, and choral-speaking. It contains ballads, folk-rhymes, and modern ballad-poems which are specially suitable for acting and miming, mimes and ballad-plays with detailed instructions, full notes on dramatization, staging, etc. ; and also a section on Miming, by M. Gertrude Pickersgill, Principal of the London School of Dramatic Art. No acting fees.

Old Rhymes and Ballads—Ballads of Robin Hood—Ballads of the North—Modern Ballad-Poems.

Ballad-Mimes : Green Broom (*Marion Welham*)—The Bailiff's Daughter of Islington (*Daisy Dykes*).

Ballad-Plays, adapted by John Hampden · Hynd Etin—Robin Hood and the Potter—Hynd Horn—Tam Lin—The Three Kings, a little Nativity Play. *Cloth gilt, 2s. net.*

Nelson Classics

Over 300 volumes.

Cloth gilt, 1s. 6d. net.

This famous series is now more attractive than ever, for it is being re-issued in striking new wrappers, with new bindings—Sundour cloths, fadeless and washable, in nine attractive colours—tinted tops, and modern title pages. At the same time it is being extended to include novels by famous modern authors, and books for the more studious reader—Dean Inge's *Protestantism*, for example, and Sir Robert Rait's *British History*.

The latest additions include : SEA STORIES, selected by John Hampden. Good yarns of the sea in many moods by H. G. Wells, John Buchan, John Masefield, W. W. Jacobs, Jack London, etc.—POEMS. Lord Tennyson. A beautiful edition in large type. Six hundred pages.—PROTESTANTISM. W. R. Inge. A new revised edition of this challenging book.—AGNES GREY. Anne Brontë. With the *Poems* of Charlotte, Emily, and Anne Brontë, portraits, and a ninety-page introduction by Flora Masson.—A PRIMER OF ENGLISH LITERATURE. A. Compton-Rickett. From the beginnings to the present day. 56 illustrations and index. An attractive survey.—TRENT'S LAST CASE. E. C. Bentley. Perhaps the best detective story in our language.—PROSE OF OUR TIME, by the foremost writers of to-day. Edited by A. J. J. Ratcliff.—PLAYS OF R. B. SHERIDAN, edited by John Hampden.—MONEY. Hartley Withers. A masterly book on a vital subject.—OLD PETER'S RUSSIAN TALES. Arthur Ransome. Illustrated. A delightful modern classic for children.

Please send for complete list : Nelsons, 35-36 Paternoster Row, London, E.C.4 ; Parkside Works, Edinburgh ; 25 rue Denfert-Rochereau, Paris ; 91-93 Wellington Street West, Toronto ; 381-385 Fourth Avenue, New York.

